



# Transportation Element

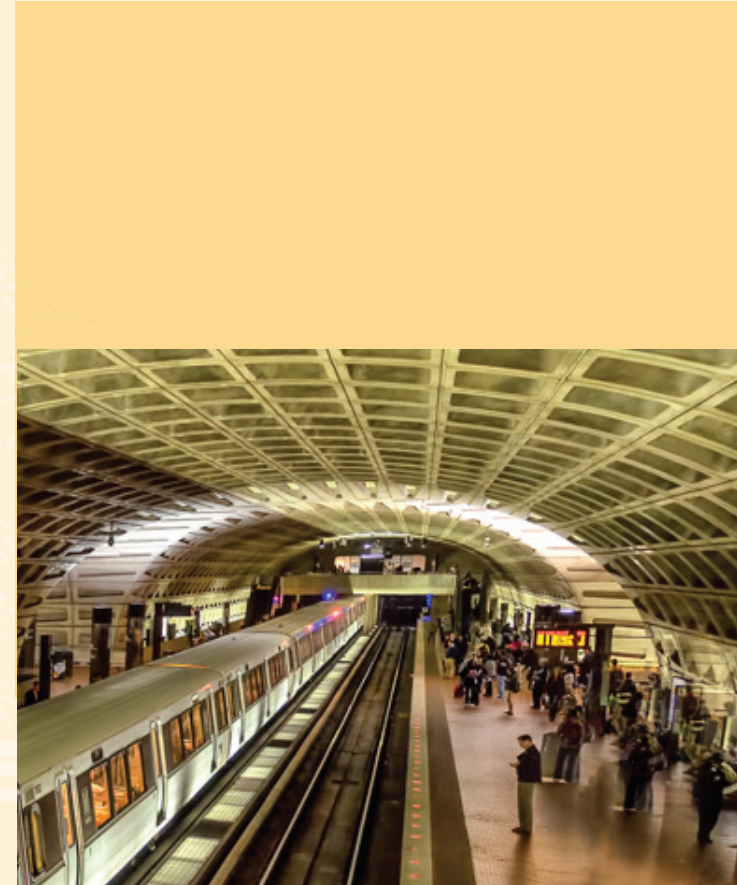
2020



# Transportation Element

## Contents

<b>Introduction to the Federal Transportation Element .....</b>	<b>1</b>
<b>Guiding Principles.....</b>	<b>4</b>
<b>Section A. Advance an Interconnected Transportation System that Meets Regional Planning Goals and Objectives.....</b>	<b>4</b>
<b>Section B. Integrate a Range of Equitable Mobility Options to Improve Transportation Access throughout the Region .....</b>	<b>9</b>
<b>Section C. Connect Transportation and Land Use to Encourage Responsible Development Patterns.....</b>	<b>13</b>
<b>Section D. Promote Efficient and Sustainable Travel to Federal Destinations.....</b>	<b>17</b>





## Introduction to the Transportation Element

The federal government’s goal is to support the development and maintenance of a multimodal transportation system that meets the needs of federal workers, residents, and visitors, while improving regional mobility, transportation access, and environmental quality.

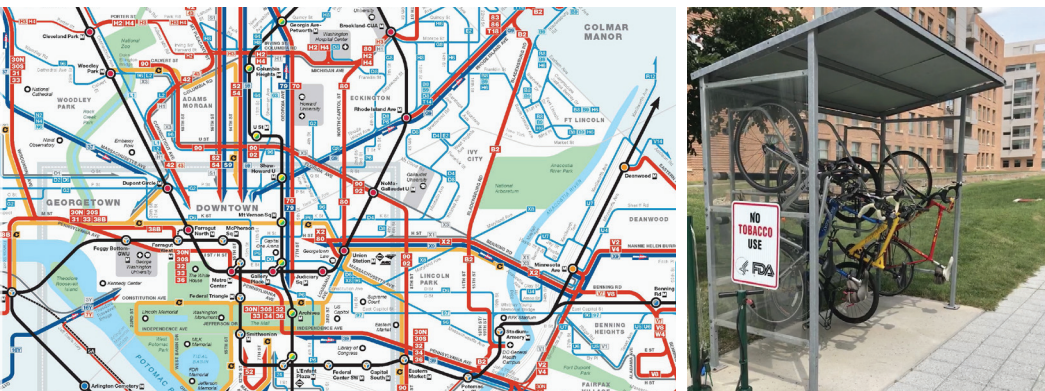
Clear, coordinated transportation policies are critical to successful urban planning strategies. The Washington, DC region, like many metropolitan areas, faces significant transportation challenges, which impacts where people live and work, development patterns, environmental conditions, and quality of life. The region is among the most congested in the country and is served by an aging transportation system. Building resiliency in transportation systems across the region is critical in responding and maintaining a safe and efficient system, as tested by the current Covid-19 pandemic. Federal, state, and local land use and transportation policy decisions are interconnected and must be coordinated to develop long-term solutions for the success of the region.

The federal government has long played an influential role in the region’s development, including helping to plan and fund the Metrorail system, which serves as the centerpiece of the region’s transit system. With employees, federal facilities, tourist destinations, and other assets in the National Capital Region (NCR),<sup>1</sup> the federal government has a strong interest in improving the quality of transportation services and infrastructure. Moving people in an efficient manner to federal workplaces and visitor destinations is critical to the region’s vitality and growth. Federal actions shape the location and design of federal facilities, the transportation decisions of workers and visitors, and the management of important components of the region’s transportation network.

Developing and maintaining a connected multimodal system requires coordination, integrating transportation and land use, and implementing a range of improvements across the region.

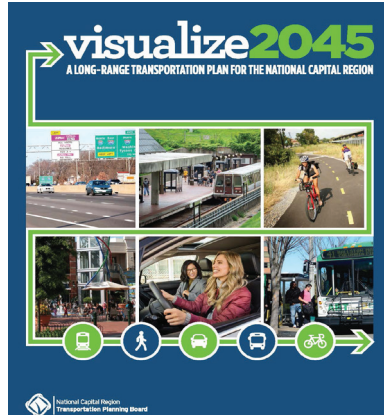
The federal government benefits from an efficient multimodal regional transportation system. It is uniquely positioned to provide leadership and support to regional efforts to maintain and build the infrastructure for a modern transportation network that connects land use and transportation.

The Transportation Element is built upon the principles of reducing single-occupant vehicle (SOV) use, increasing transit use, and creating sustainable systems. As such, federal policies promote resource-efficient planning for travel (transit, bicycling, walking, shuttles, and car/vanpooling) and development (compact, mixed-use, transit-oriented) to maximize access to workplaces and federal destinations. Policies in this element support development of a “live, work, play” environment near federal facilities that minimizes the impacts of federal workers’ travel.



## Regional Transportation System

The region’s extensive transportation system is linked to historic patterns of growth and development. The National Capital Region Transportation Planning Board (TPB) is the designated Metropolitan Planning Organization for the National Capital region and is responsible for developing and updating *Visualize 2045: A Long-Range Transportation Plan for the National Capital Region*. Adopted in 2018, *Visualize 2045* provides an overview of the region’s transportation system.<sup>2</sup>



The system includes:

- 17,000 lane miles of highways and major roads (approximately 400 miles are tolled lanes)
- 118 miles of Metrorail and 91 Metrorail stations
- 167 miles of commuter rail and 39 commuter rail stations
- Six miles of Bus Rapid Transit, light rail, and streetcars
- More than 500 miles of off-street paved trails and paths for walking and biking
- More than 200 miles of bike lanes
- More than 15 local and commuter bus systems and more than 10 paratransit service providers
- Nine intercity train stations and 14 intercity bus stations
- Three major airports (Baltimore/Washington International Thurgood Marshall Airport, Ronald Reagan Washington National Airport, and Washington Dulles International Airport)<sup>3</sup>

Numerous public agencies play a role in planning, building, operating, and maintaining the regional transportation system. Key state agencies involved with transportation infrastructure include the Maryland, Virginia, and District Departments of Transportation. City and county governments also play a significant role in making local decisions on transportation and land use. The Washington Metropolitan Area Transit Authority (WMATA), the region’s primary public transportation provider, operates Metrorail and Metrobus. Amtrak operates the national rail system and provides inter-city passenger service while

Maryland Area Regional Commuter (MARC) and Virginia Railway Express (VRE) provide commuter rail systems that serve regional commuters in Maryland and Virginia, respectively. The Metro Washington Airports Authority (MWA) oversees and operates two major airports serving the region. Federal agencies also operate a range of transportation assets, many of which serve as major components of the regional transportation system (see Section A.2).

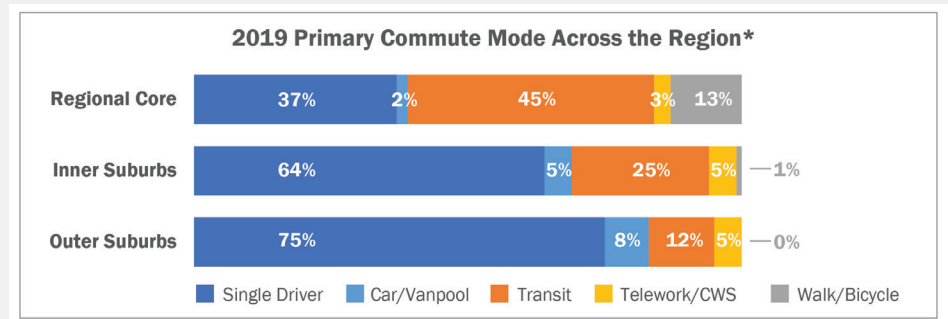
The region is well served by several public and private transportation providers that provide a range of mobility services. This includes commuter bus, taxi, ride-hailing, bikeshare, and scooter services. Car rental and car-sharing companies offer short-term vehicle rental.

There is a large difference in commute mode share regionally. In the regional core (Washington, DC, Arlington County, and Alexandria) more than 45 percent of trips to work are made by bus or rail and 13 percent by walking or biking. The percentage of these modes dramatically declines in the inner suburbs (Montgomery, Prince George’s and Fairfax Counties) and outer suburbs (Prince William, Loudoun, Frederick, and Charles Counties) where the greatest percent of work trips are made by single occupant vehicles.

## Trends Shaping Transportation Planning

The TPB completed an analysis of the region’s travel trends to inform the development of *Visualize 2045*. Over the past few decades regional job growth has contributed to consistently strong population growth. Between 2000 and 2017 the region gained one million residents—from 4.4 to 5.6 million—and added 400,000 jobs.<sup>4</sup> Future regional job growth trends remain unknown following the public health pandemic that halted growth across the region.

In 2013, the Metropolitan Washington Council of Governments (MWCOC) designated 141 activity centers which include existing urban centers, priority development areas, transit hubs, suburban town centers, and traditional towns throughout the region. By 2045, approximately one-third of the region’s population is expected to live in these activity centers, and two-thirds of the region’s jobs will be located there. Recent studies by TPB<sup>5</sup> indicate the region is successfully directing growth to these centers.



\*Mode based on home location. Source: MWCOC 2019 State of the Commute Technical Report.

Analysis by TPB in 2018 shows that the region has experienced a shift in commuter travel. The number of people driving alone or riding in a carpool has decreased while the share of people using transit, walking, bicycling, or telecommuting has increased. However, the primary way people commute remains single-occupant vehicles which accounts for 65 percent of all commute travel. Transit is the next-highest travel mode at 15 percent.<sup>6</sup> Between 2000 and 2016, bicycle commuting increased by 200 percent; though overall, bicycling accounts for only 1 percent of total commuting. Average weekday Metrorail ridership has declined from its highest level in 2008 (752,000). In 2019, this downward trend ended, when average weekday ridership reached 626,000 – a four percent increase.

There are a number of factors contributing to these trends, such as an increase in teleworking and alternate work schedules; the rapid growth of bikeshare and other bicycle infrastructure, which prompted growth in non-motorized modes of travel; and transportation and development investments in regional activity centers and other areas served by transit, which result in a reduction in the number of vehicle trips. The drop in Metrorail ridership can likely be attributed to several factors, including the system’s declining performance, WMATA’s SafeTrack program to rehabilitate the Metrorail system (it began in 2016), and the increase in use of ride-hailing services.

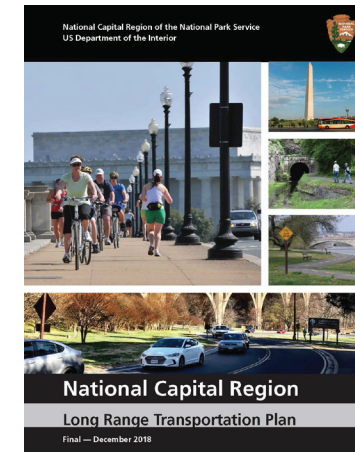
## Federal Commuting and Travel to Other Federal Destinations

Federal employees commute to work in a variety of ways and are much more likely to commute by transit than the whole regional population. According to WMATA, more than half of all Metrorail stations serve federal facilities, and approximately one third of Metrorail’s peak period commuters are federal employees.<sup>7</sup>

This reflects ongoing decisions to locate Metrorail stations near federal work centers (and locate federal offices near transit), as well as the success of federal programs, planning policies, and incentives that encourage multimodal travel options.

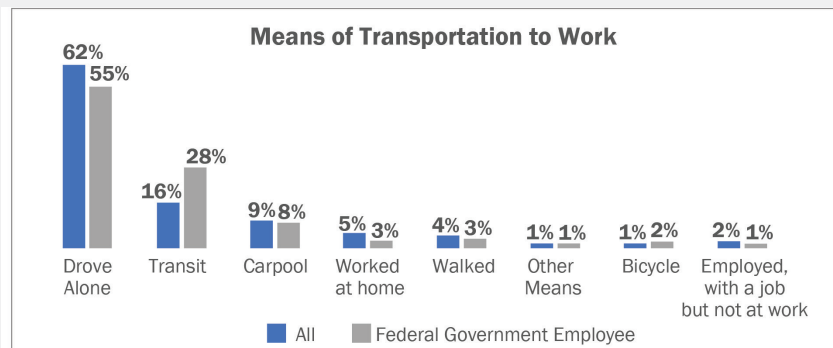
The federal government’s use of alternative work schedules and telework options contributes to commuter flexibility and reduced trips. Federal employees telework at a higher rate (48%) than the regional average (32%), and at a higher rate than employees in the private sector (30%).<sup>8</sup> Federal employees are also more likely to have access to commuter services such as transit and carpool subsidies, commute information, and bike/walk services. Trends in the workforce such as reducing the federal footprint,<sup>9</sup> increased mobility, and advances in technology will further affect commuting patterns.

Federal agencies track employee travel behavior through the master planning process and development of transportation management plans. Agencies who oversee cultural sites and visitor destinations (museums, memorials, the National Zoo, etc.) and parks also conduct transportation planning to understand how visitors travel to, from, and around these federal destinations.



The National Park Service (NPS) recently completed the *National Capital Region Long Range Transportation Plan*. This plan sets forth a 20-year vision for providing and maintaining access to NPS units throughout the region, including goals, objectives, and performance measures for how it will move towards that vision. An assessment of visitor constraints was

conducted as part of the effort, where the NPS examined the proximity of transit facilities (local and regional bus stops, Metrorail, other railway stations such as MARC, and Capital Bikeshare) to each park unit. Out of the 52 park units, 40 had access to transit facilities within a half-mile from the assumed main point of entry of each park.<sup>10</sup> In general, parks located closer to downtown Washington, DC are more accessible than those located further from the city, and these parks are more likely to be accessible via multiple modes of transportation.



Source: Census Bureau, 2013-2017 ACS 5-Year PUMS (<https://www.census.gov/programs-surveys/acs/-data/pums.html>); Tabulated by MWCOC/TPB



## Guiding Principles

This element provides policy guidance to support a regional multimodal transportation system that promotes responsible land use and development and contributes to a high quality of life for residents, workers, and visitors. Four guiding principles serve as the element's organizational framework.

These principles speak to the federal government's role in advancing regional transportation goals, supporting a range of mobility options, and promoting sustainable land use decisions. The principles also address the Commission's review authority and role in encouraging and promoting travel to federal facilities and destinations in a safe and efficient manner. The principles and the policies in this element work in concert with other elements of the Comprehensive Plan to reinforce larger ideas that the Commission supports including responsible development and environmental protection.

**A**

### **Advance an Interconnected Transportation System that Meets Regional Planning Goals and Objectives**



**B**

### **Integrate a Range of Equitable Mobility Options to Improve Transportation Access Throughout the Region**



**C**

### **Connect Transportation and Land Use to Encourage Responsible Development Patterns**



**D**

### **Promote Efficient and Sustainable Travel to Federal Destinations**



## Section A: Advance an Interconnected Transportation System that Meets Regional Planning Goals and Objectives

To achieve transportation goals and objectives, the federal government coordinates and collaborates with regional and local agencies, and other stakeholders, on a range of planning activities. Coordination is critically important for creating a unified transportation network that serves both federal and local needs. Coordination ensures that federal, regional, and local agencies can meet mutual transportation goals and best manage the impacts and benefits of planned and proposed transportation projects. Many of these projects have the potential to improve transportation services for federal commuters and visitors, greatly reduce regional congestion and improve quality of life. Further, they can better support transit-oriented development that could serve as prime locations for new federal facilities or provide transit-accessible housing for the federal workforce.

Policies within this section provide guidance on developing an integrated transportation system that supports regional planning goals and objectives.

### A.1 Regional Policy Framework and Agency Coordination

Several Transportation Planning Board (TPB) plans provide a policy framework that is the foundation for transportation planning. Visualize 2045, the long-range transportation plan for the region, builds upon planning work over the past twenty years including the TPB Vision (1998), the Region Forward Initiative adopted by the Metropolitan Washington Council of Governments (2010), and TPB's Regional Transportation Priorities Plan (2014). These plans established a regional policy framework that includes comprehensive strategies to promote an interconnected transportation system, a strong regional economy, and improve quality of life for all residents. The federal government has a vested interest in supporting efforts to meet the goals articulated in these plans.

Visualize 2045 includes a long-range planning component that goes beyond financial constraints to identify aspirational initiatives that address some of the biggest transportation challenges that the region will face in the coming decades. TPB predicts that the region's major challenges will include increased congestion on roadways and the provision of adequate transit to serve anticipated passengers. To address these challenges and reach larger policy goals laid out in endorsed plans, Visualize 2045 includes the following seven aspirational initiatives:

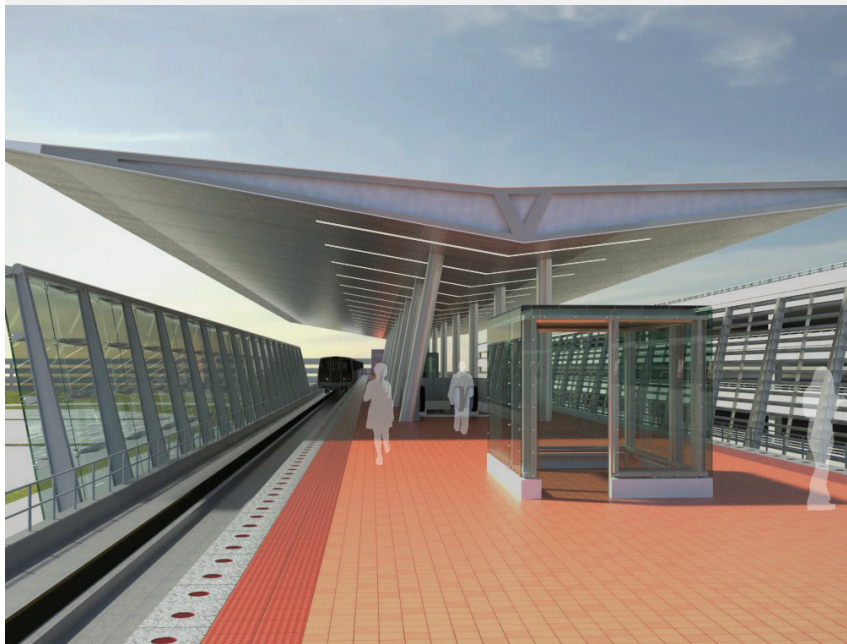
- Bring jobs and housing closer together
- Expand Bus Rapid Transit and transitways
- Move more people on Metrorail
- Increase telecommuting and other options for commuting
- Expand the express highway network
- Improve walk and bike access to transit
- Complete the National Capital Trail

These initiatives will help the region grow in a responsible manner while also providing a range of efficient, affordable, and safe mobility options for travel. In general, many of these initiatives are already being implemented or are in the planning phase. The federal government can play an important role in advancing these initiatives and should be a leader in developing projects that support the goals of these initiatives. Other regional goals and policies the federal government can support include Vision Zero, a strategy to eliminate all traffic fatalities and severe injuries while increasing safe, healthy, equitable mobility for all.<sup>14</sup> Most local jurisdictions are working towards achieving this goal, but given the range of contexts (urban, suburban, rural) in the region, solutions will vary between locations. The federal government should collaborate and coordinate with appropriate jurisdictions on Vision Zero strategies in areas adjacent to federal property.



R. Duran Ortiz

The Pentagon City Metrorail Station has pedestrian access, bicycle parking including a Capital Bikeshare station, and curb space for shuttles and buses.



Dulles Corridor Metrorail Project

A conceptual rendering of the Dulles Airport Station on the Metrorail Silver Line.

The federal government engages in a range of transportation planning activities to advance regional plans and support the transportation system. One of the primary methods in which the federal government does this is through its financial support of the Washington Metropolitan Area Transit Authority (WMATA). The federal government supports WMATA through its worker transit subsidy benefits program by providing a monthly subsidy for employees. According to WMATA's 2016 Metrorail survey and 2018 Metrobus passenger survey, 36 percent of peak period Metrorail passengers and 15 percent of peak period Metrobus passengers are federal employees.<sup>12</sup> Metrorail carries the second highest daily ridership of rail systems in the country and reinforces the region's development patterns.<sup>13</sup> With the federal government's unique role in transportation infrastructure, federal agencies must work with state, local, and regional organizations to ensure that the system is adequately funded for continued operation and expanded services, and that appropriate contributions are made to accommodate projected regional population and employment growth.

Along with WMATA, the federal government has an interest in supporting other transit service providers to ensure that the region is well served by public transportation in areas that WMATA does not operate. This extends to working with transit providers to encourage that stations are equipped to provide amenities for bicyclists and pedestrians and are designed in a manner that considers curb space for shuttles, circulators, and ride-hailing services.

The rapid growth seen throughout the Northeast Corridor, and specifically in the Washington, DC metropolitan region, has prompted the development or expansion of major transportation initiatives that have the potential to greatly change the way that people move through the region and beyond. Expansion of high speed and high capacity passenger rail can help improve inter-city connectivity from the region to other destinations across the eastern United States. Major transportation initiatives within the region range from megaprojects like the Baltimore-Washington Superconducting Magnetic Levitation Project, to more focused efforts to manage traffic like the expansion of high-occupancy toll lanes on area roadways. Federal employees and visitors live, work, and visit throughout the region, so the federal government

has an interest in collaborating on these types of efforts throughout the planning process to ensure that they can meet the needs of a broad range of stakeholders, including both federal and nonfederal entities. It is critically important to ensure that these initiatives support regional transportation and land use objectives, address impacts to environmental, historic, and cultural resources, and meet agency mission needs.

In the future, private companies may take on larger operational or management roles for transportation projects. The Purple Line, a light rail system that will connect Bethesda with New Carrollton, Maryland, is currently under construction. Although the Maryland Transit Administration will own the Purple Line, a private company will manage and operate the service through a public-private partnership arrangement. The I-495 Express Lanes in Virginia are also the result of a public-private partnership between the Virginia Department of Transportation (VDOT) and Transurban. VDOT owns and oversees the lanes while Transurban is responsible for the financing and operations. These public-private partnerships will become more common as federal funding declines for large-scale regional transit projects. As such, multiple public and private groups will have to work together to continue the success of the regional system by maximizing multimodal transportation options for residents, visitors, and workers.

Through engagement on major regional projects, the federal government seeks to both understand the bigger regional transportation picture and shape the impacts of such projects, including the ways in which they could support access to and from federal destinations. For example, Montgomery County received a grant from the U.S. Department of Transportation to construct a new Bus Rapid Transit system called FLASH along Colesville Road to connect Burtonsville with downtown Silver Spring. The availability of this system may increase the number of employees commuting by transit to the Food and Drug Administration's White Oak Campus. By supporting these types of projects, the federal government can contribute to achieving larger regional goals of reducing congestion and increasing connectivity.



The National Park Service conducted a tour bus study and this map shows the recommended sites for tour buses to park around the National Mall and Memorial Parks.



A rendering of the proposed FLASH Bus Rapid Transit system on U.S. 29 in Montgomery County, Maryland. Source: [www.ridetheflash.com](http://www.ridetheflash.com)

Clark Concepts



## Tour Bus Operations

With the number of federal attractions in the region, and the distances between those sites, visitors often choose to arrive and travel by tour bus. This is especially true of international visitors, many of whom arrive in tour groups. In 2015, the National Park Service completed the *National Mall and Memorial Parks Tour Bus Study*, to research and make recommendations for tour bus operations on the National Mall. Along with site-specific recommendations, the study highlighted broad strategies that could be effective if implemented at a regional scale and in cooperation with partners and stakeholders.

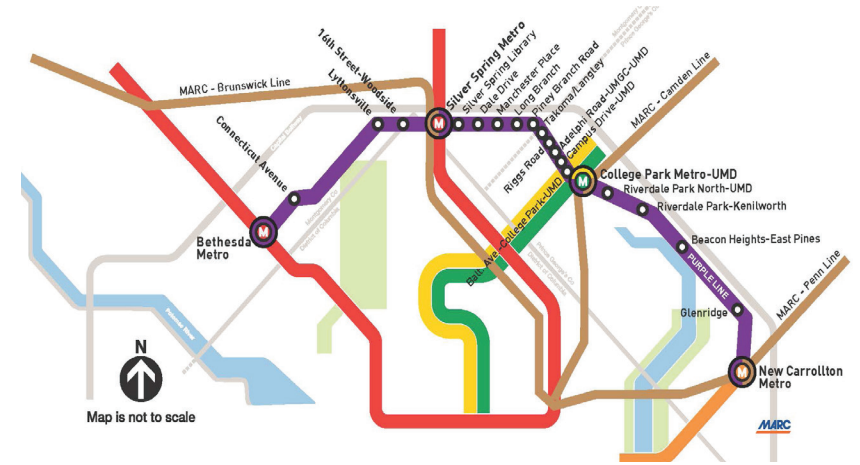
Among the topics addressed were information delivery; regulations, signage, and enforcement; parking and route consideration; and protection of sensitive natural, cultural, and historical resources.

The lack of tour bus parking within or close to the National Mall has an impact on the surrounding transportation system by increasing congestion. The issue is particularly noticeable during peak times of the day and year. Tour bus congestion can impact visitor experience and cultural resources as buses park along congested roadways and interrupt viewsheds.

By working with tour bus operators, as well as regional and local agencies, the federal government can develop strategies to manage tour bus operations and parking to minimize impacts on circulation, parks, and cultural resources.



Along with large regional projects, the federal government has an interest in coordinating with regional and local agencies and other stakeholders on a range of transportation issues. From establishing an integrated bicycle and trail network to improving tour bus operations and encouraging resource coordination among commuter bus systems, the federal government influences how travelers use and experience the transportation system. There can be challenges in connecting federal and regional systems, such as bicycle trails, due to differences in agency missions. Security requirements for some federal facilities can also pose a challenge to developing an integrated network. To the extent possible, it is important to create a seamless experience for users and integrate federal and regional trails and systems, which could be achieved through physical design and/or consistency in rules and regulations.



Purple Line light rail system.

### The federal government should:

- T.A.1** Support the development of a comprehensive and connected transportation system that meets land use, environmental, and economic goals articulated in regional plans and policies.
- T.A.2** Support capacity and service expansion of regional and local transit services, including Metrorail and Bus Rapid Transit, to increase access to public transportation and federal destinations.
- T.A.3** Work with transit providers to ensure that stations are accessible with informational signage and equipped to accommodate a range of travel options by providing parking for car-sharing services, amenities for bicyclists and pedestrians, and curb space for shuttles, circulators, and ride-hailing services.
- T.A.4** Support expanded levels of service for regional commuter rail between the District of Columbia, Maryland, and Virginia.
- T.A.5** Support the expansion of high speed and high capacity passenger rail to improve inter-city connectivity across the eastern United States, with Washington Union Station as a regional hub.
- T.A.6** Consider regional transportation and land use objectives and potential impacts to natural and cultural resources when evaluating transportation projects that would improve travel.
- T.A.7** Work with relevant agencies and other stakeholders to promote bicycling and establish a connected regional bicycle network.
- T.A.8** Coordinate with regional and local agencies to develop an integrated system of bicycle and pedestrian trails that provide connections throughout the region, including to and from federal destinations.
- T.A.9** Coordinate with regional and local agencies to ensure that trail connections and rules in areas with multiple jurisdictional boundaries are clear to users and result in seamless transitions.
- T.A.10** Work with stakeholders to develop strategies to manage tour bus and commuter bus operations and parking to minimize negative impacts on circulation, parks, viewsheds, and cultural resources.

## A.2 Management and Maintenance of Federal Transportation Assets

While the vast majority of transportation infrastructure is owned and maintained by municipal and state entities, there are many important transportation assets in the region that are operated and maintained directly by the federal government, generally through federal land management agencies, such as the National Park Service and U.S. Fish and Wildlife Service. In fact, some of the most important links in the regional transportation network, such as the George Washington Memorial Parkway, Baltimore-Washington Parkway, Suitland Parkway, and Arlington Memorial Bridge are maintained by federal agencies with federal funds. NPS transportation assets in the region are not only critical for accessing and exploring nationally significant destinations, but many times are themselves culturally significant resources that must be protected. Further, many NPS assets function as commuting routes and face the same challenges of other urban roadways, such as congestion and safety considerations, which strain facility conditions and create a burden on maintenance. This dual function can create tensions between maintaining assets to an acceptable level for the heavy use they receive, protecting natural and cultural resources, and supporting agency missions.

It is important to note that the long-term sustainability of the NPS National Capital Region transportation system faces financial challenges. In recent years, some major transportation funding programs have leveled, dropped, or been eliminated, and the estimated capital, operations, and maintenance needs are higher than projected funding. NPS estimates its regional transportation maintenance needs to be \$86.8 million with an estimated annual average of \$36.5 million in funding, which results in a \$50.3 million funding gap based on forecasted funding levels.<sup>14</sup> To manage this gap, NPS developed a strategy that directs available funding towards the highest priority assets, such as bridges and major roads to ensure that the most important transportation assets remain in good condition to support NPS objectives for resource stewardship, visitor enjoyment, and safety.

Beyond federal assets, the federal government has an interest in the maintenance and improvement of existing transportation infrastructure, particularly along multimodal corridors that support transit, pedestrian, and bicycle use. In fact, many of the region's bicycle and pedestrian trails are on NPS or federal property, including the Chesapeake and Ohio Canal, Rock Creek Park, and others. Ensuring that these corridors can accommodate a high level of use is critical to meeting larger sustainability goals, reducing congestion, and moving people throughout the region in an efficient manner.

### The federal government should:

- T.A.11** Support the maintenance and improvement of existing transportation infrastructure, with a priority on multimodal transportation corridors that support transit, pedestrian, and bicycle use.
- T.A.12** Support efforts to prioritize transportation funding towards maintenance of federal infrastructure that function as part of the regional commuter system.
- T.A.13** Support improvements that increase safety and reliability and preserves the historic character and cultural and national significance of the parkways.
- T.A.14** Coordinate with local, federal, and other stakeholders to accommodate safety improvements consistent with industry standards in a manner that minimizes impacts on natural and cultural resources.



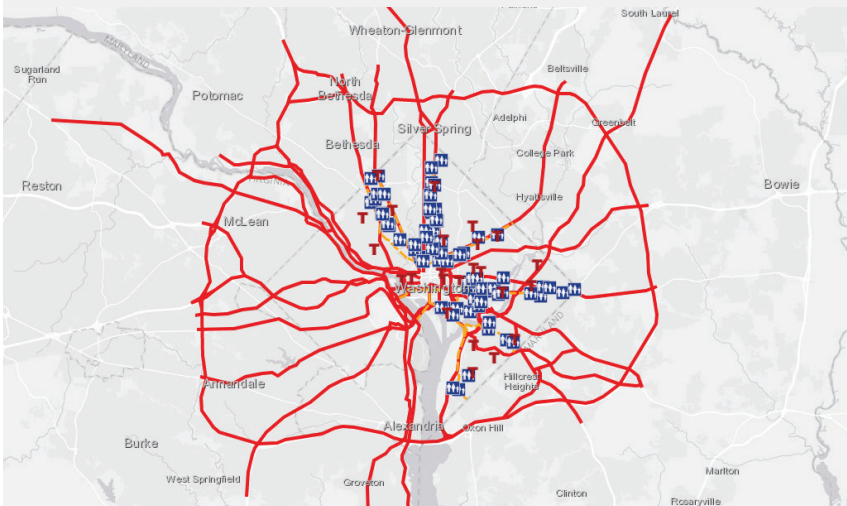
Arlington Memorial Bridge, a National Park Service asset, is an important link in the regional transportation network.



Pennsylvania Avenue supports all modes of transportation.



Flooding along Constitution Avenue in Washington, DC



Map of Evacuation Routes in the District of Columbia. Blue Walkout Route Collection Points indicate where evacuees can board buses to exit the city.

### A.3 Resiliency in Transportation Planning

To ensure a safe and efficient transportation system in the NCR, the federal government must consider emergency preparedness and resiliency. Maintaining transportation assets is important to ensure that during emergencies critical infrastructure functions as needed and emergency responders can travel freely. Public safety, particularly during and after emergencies, depends on the mobility and accessibility that the regional transportation system provides. The federal government can support efforts to manage transportation infrastructure in response to states of emergency by facilitating coordination across the region and by effectively maintaining its own assets to meet regional emergency needs.

Resiliency from a transportation perspective is the ability to withstand or recover from extreme or changing conditions to ensure the region remains accessible through a range of mobility options. Both natural (extreme weather events, flooding, heat, public health, etc.) and man-made hazards or events (terrorism, cyberattacks, etc.) can disrupt the transportation system. To respond to such events, the federal government needs to understand hazards and threats, and also identify potential mitigation strategies to ensure that the transportation system continues to function and provide reliable mobility options during and after disruptions. While some safety considerations or evacuation services can lead to temporary or permanent transportation closures, these must be carefully considered to understand system-wide impacts (for instance, the temporary closure of the Metro system).

Planning and designing infrastructure that responds to these challenges requires a regional approach that is informed by past efforts and existing conditions and is coordinated with multiple stakeholders. When designing, locating, or improving transportation infrastructure, the federal government should consider asset resilience in selecting materials and ensure that maintenance requirements are captured in life-cycle costs.

### Resiliency in Public Health Emergency Response

In early 2020, cities around the world had to redefine the use of public transportation to support the health and safety of their communities during the novel coronavirus (COVID-19) pandemic. Government directives to stay home and public concerns encouraged widespread teleworking and increased investment in supporting technology and practices, while also highlighting groups that lacked access and types of operations that could not be readily conducted remotely. With fewer workers commuting into work, the region experienced fewer cars on the road, reduced use in public transit, and improved air quality. With impacts ranging from increased use of public space and bicycles, to improved air quality from fewer vehicle trips, NCPC will continue to monitor the short and long term planning implications of public health emergencies.

#### The federal government should:

- T.A.15** Support regional efforts to manage transportation infrastructure in response to states of emergency.
- T.A.16** Support efforts to understand hazards and threats to transportation infrastructure and identify mitigation strategies to ensure system reliability.
- T.A.17** Consider asset resilience to natural events or man-made hazards when designing, locating or improving transportation infrastructure. Utilize industry best practices when selecting appropriate materials, and ensure that any increased maintenance requirements are reflected in life-cycle costs.

## Section B: Integrate a Range of Equitable Mobility Options to Improve Transportation Access throughout the Region

The region's transportation system is complex and includes rail and bus transit, highways and toll roads, trails, and other infrastructure for bicyclists and pedestrians. In addition, recent innovations in bike-sharing, ride-hailing, and car-sharing services allow workers, residents, and visitors a range of options for travelling within the region. The flexibility afforded by new transportation technologies, such as dockless bicycles and electric scooters, may allow them to fill a gap in transportation connectivity in urban areas of the region. Providing a range of mobility options that can be equitably accessed by all users is critical for protecting the environment, utilizing resources efficiently, and contributing to healthy lifestyles. The federal government plays an important role in contributing to these goals.

Policies within this section promote integrating multimodal options across the region to improve connectivity and ensure that all users have access to a variety of transportation resources.

### B.1 Expansion of Mobility Options

With a steadily increasing population, the National Capital Region has seen a commensurate increase in roadway congestion over the years. Significant investment has been made in regional transportation infrastructure, including an expanding network of multimodal transportation options (e.g., Metrorail, bus rapid transit, etc.), but automobile use continues to make up a large share of regional travel. More automobile use increases regional traffic, has implications for environmental quality (air quality, water quality, erosion, etc.), and poses a maintenance burden for entities that are responsible for the upkeep of an expanding network of facilities.

NCPC recognizes that cars are still an important component of regional mobility but supports efforts to reduce reliance on automobiles and expand regional access to multimodal transportation solutions. While driving may be the only way to reach certain federal destinations in the region, many facilities are sited in locations that support the use of alternatives such as transit, biking, carpooling, etc. The most comprehensive and widely used of these alternatives has traditionally been the regional transit system, which includes Metrorail, Metrobus, and other high-capacity public transportation systems. In addition, carpooling and vanpooling have been effective in reducing single-occupancy vehicle travel.

Given the hub-oriented nature of transit, a comprehensive transportation network consisting of multiple modes is critical to promoting mobility and interconnectivity to destinations throughout the region. Smaller transportation services that facilitate travel between transit hubs and destinations, as well as off-campus shuttle and on-campus circulator services for employees, can serve as important links that provide first- and last-mile connectivity. Walkable, pedestrian-friendly streets that link stations with destinations can also help facilitate connectivity, as can infrastructure to support safe bicycle use, including cycle tracks, protected bike lanes, multiuse trails, and shared lane markings.

A shift to lower-impact transportation modes is already well underway across the region, particularly among the federal workforce, as is evidenced in surveys completed by the Metropolitan Washington Council of Governments. Surveys of federal workers indicate that drive alone mode share has consistently decreased over the years, while federal commuting via transit has increased. As reported in the 2013-2017 American Community Survey, there is a notable difference between commuting patterns of federal employees and the general population in this regard. Federal employees reported driving alone eight percent less frequently than other workers, and use transit 12 percent more often.



Dockless bicycles and electric scooters have emerged in the micromobility transport options.

These shifts are likely due, in large part, to efforts by the federal government to reduce parking demand and incentivize multimodal travel to federal sites through transportation demand management programs, telework programs, and commuter assistance benefits and services. In the 2019 State of the Commute Survey Report, 85 percent of respondents who worked for federal agencies had such services available, including transit benefits, commute information, bike/walk services, and carpool subsidies, among others. Further, federal agencies tend to have more comprehensive telework programs, which reduce regional transportation demand overall for federal commuters.<sup>15</sup> As described in the 2019 survey, the federal telework rate was 48 percent, which is much higher than any other employment sector. The development of robust transportation demand management programs at federal facilities, which include many of these services and strategies, has been a major goal of NCPC policy for decades.

By shifting travel away from congested regional roadways to alternative modes of transportation, mobility options are improved for all users, including those who must drive. While recognizing that certain users must use automobiles as their primary mode of transportation, NCPC seeks to continue the trend away from single-occupancy vehicles to the extent practicable, and has developed a set of policies that aim to enhance access to federal destinations via a variety of travel modes, including transit, bicycle, pedestrian, and vehicle. Through both federal investment and collaboration with local jurisdictions, the federal government can create an effective multimodal network that meets the mobility needs of all users.

**The federal government should:**

- T.B.1** Support efforts of local jurisdictions to design and implement new, expanded, and innovative multimodal services that connect to the existing public transportation network and enhance first- and last-mile connectivity, including supplemental transit services and micro-mobility solutions like dockless bikes and scooters.
- T.B.2** Work with local jurisdictions to ensure that there is adequate infrastructure for bicycles and pedestrians to safely and efficiently travel to and from federal destinations, including usable sidewalks, enough lighting, protected bike lanes, and multiuse trails, as appropriate.
- T.B.3** Provide secure bicycle parking spaces or bicycle lockers in close proximity to federal building entrances and in convenient locations throughout federal campuses, such as in parking facilities and at transit centers.
- T.B.4** Coordinate with local and regional bike sharing programs to expand service at federal facilities to provide a flexible, comprehensive, and efficient bike sharing network.
- T.B.5** Find opportunities to allow regional and neighborhood trail access across federal land, working with federal security staff to determine appropriate access points, pathways, and hours of operation.
- T.B.6** Operate shuttles that provide access between transit and federal destinations if adequate off-site transit service is not otherwise present. When providing access to federal campuses, such shuttles should also provide on-campus circulation between buildings. Any shuttle system should include waiting facilities with shelters and benches and adequate wayfinding signage. Shuttle services should be coordinated among federal agencies with overlapping route requirements to minimize costs and improve service.



The College Park-U of MD Metrorail Station has a secure bike and ride facility that users can access for free with a SmartTrip card.

- T.B.7** Operate cross-town shuttles in urban areas with limited local service to provide transit between federal agencies that regularly do business with one another, or among multiple agency office locations.
- T.B.8** Provide publicly accessible bicycle racks, bicycle sharing stations, and parking for vehicle-sharing services on federal land, where possible, or coordinate with local jurisdictions to provide them near federal facilities.
- T.B.9** Support roadway improvements that prioritize carpooling and the use of low-emission vehicles, including the use of high-occupancy vehicle lanes that provide priority access for high-capacity transit providers.

## B.2 Transportation Equity

In developing an effective multimodal transportation network, it is important to ensure that all users have access to mobility options. Historically, factors such as affordability and physical connectivity have prohibited transportation access for certain users. For example, while many highways in the region cross through underserved areas, users in these communities may be unable to utilize these highways by automobile travel, which can be prohibitively expensive given the costs of car ownership and operation. Other, more affordable transportation modes, such as public transportation, may have gaps in connectivity that do not provide direct access in communities that need it most. While new, more flexible transportation services, such as dockless bicycles and scooters, may improve first- and last-mile connectivity between transportation services, these services generally require smart phone access, which can be a barrier for some.

To ensure that the transportation network can operate in a manner that provides the greatest benefit, regional transportation planning should focus on equitable access. This should include the development of new transportation services or physical improvements that can improve access for users of all incomes and abilities. It should also include the expansion of established and proposed public transportation systems to the communities that need them most. The Transportation Planning Board took an important step in engaging such communities in the transportation planning process by identifying Equity Emphasis Areas,<sup>16</sup> areas within the region with higher than average concentrations of low-income and/or minority populations. This identification will help avoid adverse effects of its programs, policies, and activities on vulnerable populations.

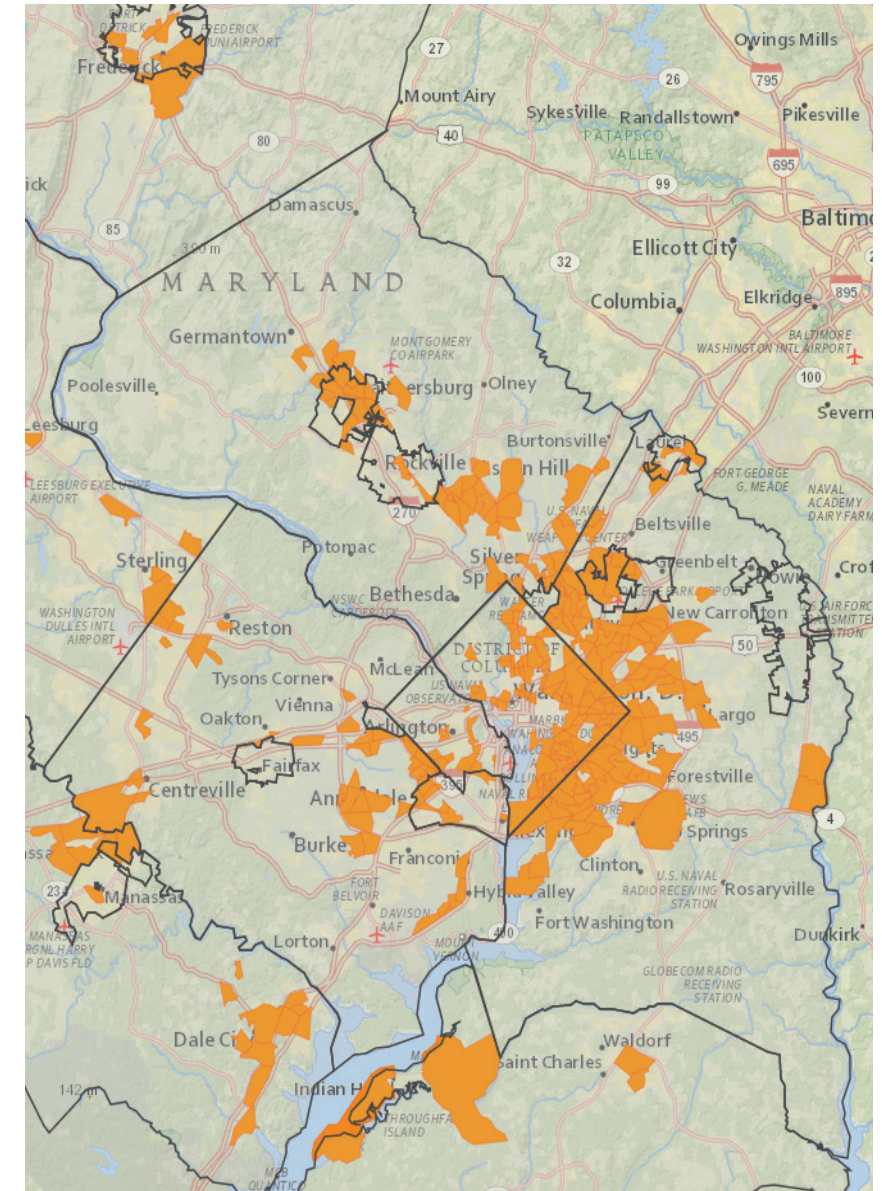
In the development or expansion of transportation services, transit providers and government agencies should fully consider any potential impacts on the range of communities through which transportation systems pass, including whether they place any undue burden on vulnerable populations. Certain communities have been disproportionately impacted by transportation decisions in the past, including the expansion of the Interstate Highway System through America's cities. This is evident in areas throughout the region, including Southeast Washington, where the Anacostia Freeway creates

a physical barrier between the residential communities to the east of the Anacostia River and recreational amenities to the west. The freeway also prohibits pedestrian access to sites and neighborhoods across the Anacostia River, such as the Capitol Riverfront and Southwest Waterfront.

As urban freeways reach the end of their lifespans or need major improvements, there may be opportunities to replace or reconfigure them to reestablish the urban fabric and street grid to restore affected neighborhoods. Further, there may be opportunities to extend the multimodal transportation network into traditionally underserved communities to enhance transportation access, including public transit, trails, and sidewalks.

### The federal government should:

- T.B.10** Establish a multimodal transportation network that supports a range of mobility options accessible to users of all incomes and abilities.
- T.B.11** Support the extension or improvement of the public transportation system's service area into developed, but underserved, areas of the region.
- T.B.12** Minimize negative impacts of transportation infrastructure projects on minority and low-income communities.
- T.B.13** Support federal and local government efforts to remove or deck freeways and other transportation infrastructure that create barriers to physical access throughout the region, particularly in communities that have been disproportionately impacted by transportation infrastructure.
- T.B.14** Work with local jurisdictions to improve the accessibility between the regional transit system and federal properties for all users through accessible pathways, sidewalks, streets, and curb ramps.



2018 Equity Emphasis Areas

### B.3 Emerging Transportation Modes

While NCPC transportation policy has historically focused on more traditional modes of transportation, there has been an expansion of new, innovative transportation modes in recent years that provide an opportunity to improve transportation access throughout the region. For example, dockless bicycles and electric scooters were introduced throughout the region, and are being used to assist both federal commuters and visitors to reach federal destinations in more urban areas. Ride-hailing services have also served to improve first- and last-mile connections.

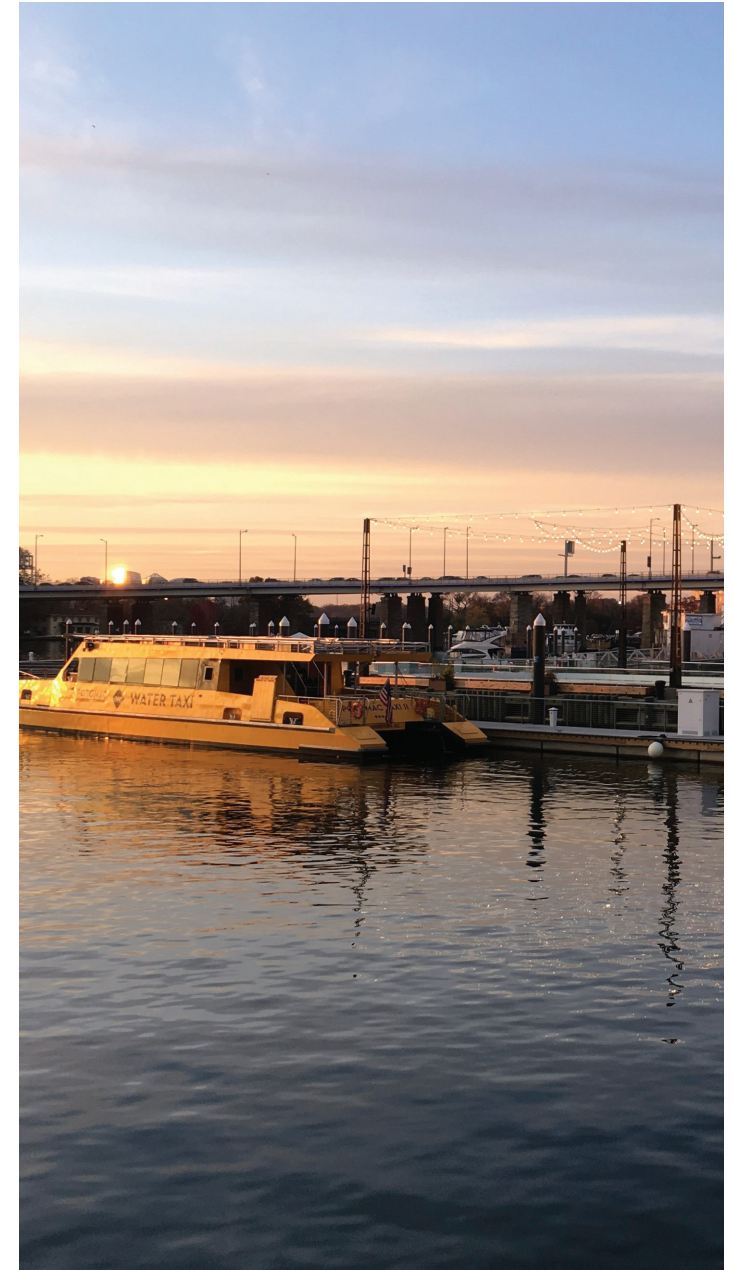
While their impacts are largely unknown at this point, the large-scale introduction of autonomous vehicles is also likely in the future, which could change the way people access federal destinations and shift parking needs. Further, the recent expansion of other, non-traditional transportation services, such as water taxis or fast ferry systems that link key economic centers and visitor destinations along the Potomac River, also serves to meet transportation needs of commuters and visitors while reducing the burden on a constrained regional transportation network.

Though NCPC recognizes that emerging transportation modes have the potential to greatly improve transportation access, it is important to note that they create new challenges that must be effectively managed to reduce potential negative impacts. The introduction of electric scooters, in particular, resulted in conflicts with pedestrians and vehicles that were not accustomed to their rapid speeds and nimble movements. Further, improperly parked dockless bikes and electric scooters have created clutter that impede pedestrian movement, visually impact streetscape character, and may conflict with operations at federal facilities and destinations. This has been a particular burden for certain federal agencies, some of which have expressed frustration with the proliferation and abandonment of these vehicles at federal destinations. In addition, while ride-hailing services have increased transportation access, they have also resulted in an increase in vehicle miles traveled, and compete for curbside space with other transportation uses.

Recognizing that advanced planning is needed to effectively and safely accommodate emerging transportation modes, federal agencies should encourage the use of new transportation technologies to the extent that they are able to fill a connectivity gap for employees and visitors to federal destinations.

#### The federal government should:

- T.B.15** Support expansion of the water taxi system to provide an alternative commuting mode and access to waterfront attractions and employment centers. Coordination with federal entities to address security, mission requirements, transportation connectivity, and land use issues is critical.
- T.B.16** Coordinate with regional transportation agencies and providers of emerging transportation technologies to ensure that these services improve regional travel and reduce reliance on single-occupancy vehicles, and address negative impacts.
- T.B.17** Consider providing dedicated curb and public space within the right-of-way to accommodate beneficial transportation uses, as appropriate.
- T.B.18** Provide designated pickup/drop-off locations for ride-hailing services at or near federal destinations to reduce parking demand, improve traffic circulation, and minimize conflicts with other travel modes.
- T.B.19** Encourage collaboration between federal agencies and local government sponsors of dockless mobility programs to enhance multimodal access to and through federal properties while reducing the potential for negative impacts, such as physical and visual clutter.



A water taxi at The Wharf in Southwest Washington. This service offers another mode of transport to link key economic centers and visitor destinations along the Potomac River.



Union Station is a major hub for passenger trains including commuter and regional systems.



The NoMa-Gallaudet U / New York Ave Metro Station is within an Equity Emphasis Area and has experienced increased ridership in recent years.

## Section C: Connect Transportation and Land Use to Encourage Responsible Development Patterns

Land use and transportation decisions are integral to one another and directly influence livability in our region. Issues such as traffic congestion, infrastructure costs, housing affordability, and greenhouse gas emissions are impacted by how we integrate transportation and land use decisions. The location of a Metrorail station or transportation facilities, such as roads, bridges, parking areas, bicycle facilities, and sidewalks, directly impacts the type of development around them. Conversely, the type of development in a specific area influences the travel choices and how people get to work, home, or other destinations. As the region continues to grow, both in terms of population and jobs, it is even more important to coordinate land use and transportation planning to accommodate pedestrian and bicycle safety, enhance public transportation service, improve road network connectivity, and encourage a multimodal approach to transportation.

Policies within this section provide guidance on integrating transportation planning and land use decisions to promote responsible development patterns.

### C.1 Regional Transit-Oriented Development

Improving regional mobility and facilitating economic activity are both critical to our region's economic health and overall livability. With its large workforce living and working in the region, the federal government is a key player and has a responsibility to promote sustainable development. This responsibility is not limited to minimizing the impact of federal commuting on the region—it extends to advancing a regional strategy that encourages employees to live closer to their jobs and transit, supports transit and multimodal investments, and promotes compact and transit-oriented development. It also supports efforts to provide a variety of housing options for a range of incomes along major transportation corridors and hubs.

The federal government can help limit sprawl by supporting compact, transit-oriented development and locating federal workplaces within regional activity centers, which are the region's priority growth areas. Regional activity centers are

often established around existing urban centers, suburban town centers, traditional towns, and transit hubs. The region's highest density housing is often located close to transit centers in these locations.

The Metropolitan Washington Council of Government's Visualize 2045 plan highlights how new housing and employment will increase in regional activity centers by 2045 and that new transportation connections, particularly transit, will complement this growth to reduce sprawl, commute times, and congestion.<sup>17</sup> By locating new federal workplaces in regional activity centers and working with regional and local agencies, the federal government can support transit-oriented and transit-accessible employment throughout the region. The federal government can promote compact development by placing federal workplaces and attractions close to transit nodes and encouraging the use of public transit, thereby, reducing reliance on single occupancy vehicles and offering more transportation options.

#### The federal government should:

- T.C.1** Create partnerships between federal agencies and local governments that incentivize housing options close to work, support multimodal commuting, and support shorter commute times through federal facility location decisions.
- T.C.2** Support efforts to provide a range of housing types for a variety of income levels along major transportation corridors.
- T.C.3** Support compact development patterns at or adjacent to Metrorail stations, other transit centers, or multimodal corridors that maximize access to transit services for federal workers and visitors.
- T.C.4** Encourage the development of, and access to, intermodal transit centers within highly developed areas and regional activity centers to maximize transit use and provide improved connectivity for all users.



## C.2 Development on Federal Facilities

There are many factors that influence the location and design of federal facilities (e.g., workplaces, cultural sites, and other destinations) within the region including agency mission, security requirements, operational needs, and budget. The Federal Workplace Element provides guidance on locating new workplaces in areas with access to transit. Policies in this section reinforce that element and provide direction on how federal agencies should plan and design their facilities to link to the transportation system and promote responsible development patterns. New federal workplaces, cultural sites, or other destinations should maximize opportunities to locate adjacent to multimodal corridors and, where possible, prioritize transit-accessible locations.

The region includes a range of facilities that reflect different planning and design eras. Facilities located in or close to downtown Washington, DC, such as the Washington Navy Yard or Marine Barracks Washington, tend to be older and reflect a denser, more walkable development pattern than those located in suburban locations, such as Fort Belvoir in Virginia. Typically, sites in urban areas are well served by transit and have greater travel options than those in the region. However, there are urban campuses, such as the U.S. Naval Observatory, that are not well served by transit and where single-occupant vehicles remain the primary mode by which employees and visitors reach the facility.

Regional transit systems, including Metrorail, were designed to serve many major federal employment centers. There is also strong interest in locating federal worksites to take advantage of transit service. At the same time, many federal buildings and campuses have security requirements or mission needs that can limit access to transit facilities or services for federal users and surrounding communities. Security requirements or mission needs can disrupt regional and local transportation networks, including sidewalks, trails, and roads. It is important to balance these considerations when selecting new locations for federal uses, and to minimize transportation disruptions from security measures and, where feasible, provide access to, and connections through, federal facilities.

A facility's location and availability of transit or other mobility options influences travel behavior and determines the level of impact on the local and regional transportation system. In locations that already provide nearby transit, pedestrian, and bicycle infrastructure, federal facilities should connect to and enhance these systems in a way that is compatible in scale and design. In more suburban locations, federal facilities should provide direct connections for all modes of travel to adjacent streets and through installations so that the transportation network is continuous. While security considerations may prevent direct or continuous connections, entry points or gateways to federal facilities should be accessible and accommodate a range of mobility options.

As discussed in the Federal Workplace Element, new technologies and work practices are redefining the workplace, allowing employees to work anywhere and anytime. Flexibility in the workplace can help advance goals for environmental stewardship and help influence travel behavior. Previous policies in the 2016 Transportation Element encouraging telework, alternative work schedules, and use of transit subsidies have been incorporated into the Federal Workplace Element update.

Federal agencies should also assess the impacts of their projects on the transportation network and provide mitigation to ensure that the network functions adequately when projects are completed. In addition, when planning transportation projects, the federal government should consider opportunities to incorporate green infrastructure such as permeable pavers, bioretention areas, bioswales, rain gardens, and vegetated swales where possible. The federal government should also support strategies that reflect a complete streets approach by acknowledging that streets should be designed and enables safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Transportation improvements should consider the surrounding context, including location within or adjacent to historic districts or view corridors, or areas with design guidelines, in the design, layout, scale, and materials of facilities or streetscape features.



The Food and Drug Administration campus in White Oak, Maryland.

Development patterns at federal sites have a notable impact on transportation demand and internal circulation patterns. Federal campuses should be designed with park-once-and-walk districts, so that several needs are met in compact development areas and travel between buildings on campus can be reached through a system of dedicated, connected, and continuous trails, protected bike lanes, and sidewalks. Well-designed, compact development areas can create urban environments that encourage walking and biking for travel between buildings, and rely less on motorized transportation to reach destinations. For campuses located in areas with limited amenities such as retail services and dining options, providing a mix of uses is a benefit to employees and minimizes congestion on local roadways.

The federal government must consider several factors when locating, designing, and managing parking. When designing parking facilities at federal properties, it is important to support design solutions that are compatible with other adjacent uses and reduce the impacts of curb cuts on public spaces. Parking facilities should integrate bicycle facilities such as bike racks and lockers to encourage multimodal modes of travel. Parking facilities should be designed in a manner that can be adapted for another use should parking no longer be needed.



The George P. Schultz National Foreign Affairs Training Center integrates bicycle parking within the landscaped buffers around several surface parking lots.

For example, vegetated buffers or directed, controlled lighting may be needed to reduce the visual impacts of parking facilities. Other mitigation may include incorporating retail into parking facilities. While below-grade parking structures are preferred, if surface parking lots are needed, they should be designed in an environmentally sensitive manner. Surface parking should be removed, converted to open space, or used for planned development projects when no longer needed.

**The federal government should:**

- T.C.5** Maximize opportunities to locate workplaces, cultural sites, or other destinations adjacent to multimodal corridors and prioritize transit-accessible locations, where possible.
- T.C.6** Provide access and connections through federal campuses/workplaces to the local and regional transportation system, as appropriate, and minimize disruptions that result from security measures.
- T.C.7** Ensure transportation improvements are compatible with the existing transportation network and available services in the surrounding area.
- T.C.8** Consider the surrounding context, including location in historic districts, view corridors, or any applicable design guidelines, in determining the design, layout, scale, and materials of streetscape features.
- T.C.9** Assess impacts of development projects on the transportation system and provide mitigation to ensure that the system functions adequately when projects are completed, with an emphasis on multimodal solutions.
- T.C.10** Provide a system of dedicated, inter-connected trails, protected bike lanes, and sidewalks, for pedestrians and other micro-mobility options, among federal campus entrance points and all on-site buildings.

- T.C.11** Integrate green infrastructure measures into transportation projects to meet sustainability goals.
- T.C.12** Encourage compact development and connected walking, bicycle, shuttle/transit infrastructure and wayfinding on federal campuses so users can easily and comfortably travel between on-site destinations.
- T.C.13** Prioritize parking structures over surface parking. Encourage parking structures to be located below ground, in the interest of efficient land use and good urban design.
- T.C.14** Encourage surface parking lots to be designed in an environmentally sensitive manner using features such as permeable pavers, bioswales, green roofs over covered parking, and/or solar panels.
- T.C.15** Encourage parking structure design to be sensitive to the surrounding context and provide opportunities for integrating other uses or adaptable reuse, where possible.
- T.C.16** Encourage that surface parking lots, when no longer needed, are removed, converted to open space, or used for proposed development.
- T.C.17** Locate parking facilities so they do not obstruct pedestrian or bicycle access to buildings and minimize their visibility from surrounding public rights-of-way.
- T.C.18** Consolidate parking facility access to minimize curb cuts where possible.

### C.3 Multimodal Corridors in the Monumental Core

Washington’s public realm, including its streets and avenues, are linked to its image and character as the nation’s capital. The Urban Design and Historic Preservation Elements highlight the importance and design quality of these streetscapes and provide guidance on their preservation, maintenance, and adaptation. Many of these streets also function as multimodal corridors. This section provides guidance on these resources with respect to transportation issues.

The monumental core as defined in the Urban Design Element includes the U.S. Capitol grounds, the White House, the National Mall, Federal Triangle, and the surrounding government buildings and civic, cultural, and symbolic structures. Because of this significant setting, monumental core streets have a strong and cohesive character elevating them from other capital city streets. Many of these streets, such as Pennsylvania Avenue, NW between the White House and the Capitol, function as multimodal corridors and at the same time are often temporarily closed for celebrations, special events, and festivals. These streets must be designed to accommodate these activities as well as provide safe and reliable mobility options for all users. Pennsylvania Avenue is well served by multiple transportation modes, but it lacks clear north-south pedestrian connections through the Federal Triangle, and east-west pedestrian connections through the U.S. Capitol grounds and President’s Park. It also has additional roadway width that could be reallocated for other purposes while maintaining acceptable levels of service for vehicles.<sup>18</sup>

The Pennsylvania Avenue Initiative is exploring strategies to improve connectivity and rebalance the public space to better accommodate pedestrians, bicyclists, and transit users. These strategies may incorporate reduced travel lane widths, create compact intersections, clearly designate pedestrian and bicycle zones, and include traffic calming measures that help create a more balanced and efficient transportation system in a manner that respects the character of the monumental core.

#### The federal government should:

- T.C.19** Support the development of multimodal corridors that respect the character of monumental core streets that provide safe, convenient, and equitable mobility options.
- T.C.20** Ensure that monumental core streets function as multimodal transportation corridors while allowing flexibility to accommodate special events and gatherings.
- T.C.21** Support efforts to reconfigure travel lanes within the right-of-way to balance multimodal travel including reduction in travel lane widths and large curb radii, where possible.



Pennsylvania Avenue is a multimodal corridor in downtown Washington.

## Section D: Promote Efficient and Sustainable Travel to Federal Destinations

Transportation management planning and parking policies collectively serve as important tools toward improving access, resource utilization, environmental stewardship, and overall quality of life. With the concentration of federal employees and destinations, NCPC's policies are intended to facilitate multimodal access and reduce demand for resource-intensive transportation, particularly single-occupancy vehicle travel.

### D.1 Transportation Management Plans

A Transportation Management Plan (TMP) is a campus or site-specific plan that sets forth short- and long-term transportation goals for federal facilities and establishes Transportation Demand Management (TDM) strategies to help meet those goals. TDM strategies are designed to change traveler behavior, such as reducing the number of peak travelers, reducing the total number of travelers, encouraging more travelers to share vehicles, and shifting travelers to transportation systems with excess capacity. TMPs are a tool to help federal facilities operate in a sustainable manner; modify employee commuting behavior to more efficient and less impactful levels; reduce traffic congestion; and create efficient facilities that reduce emissions, impervious surfaces, and parking needs.

TMPs should include both short- and long-term travel goals, implementation methods and monitoring practices. Goals should include a reduction in automobile parking to meet and maintain a facility's applicable employee parking ratio. Commute mode share targets should be based on the facility's access to public transit and other non-automobile infrastructure. Agencies should also consider how alternative work arrangements such as teleworking and compressed work schedules can contribute towards managing transportation impacts. Agencies also have the opportunity to consider long-term strategies such as charging employees for agency provided parking or treating parking as a taxable benefit to the extent permitted by law. This approach could lead to fewer employees driving and help meet parking ratio goals.

Federal agencies should regularly engage with employees and adjacent community groups to devise transportation management plans that reduce congestion and meet sustainability goals.

NCPC requires the completion of a TMP for all master plans and any project that staff determined has transportation implications. Examples include projects that result in an increase in the number of employees or visitors travelling to a workplace or other destination, a change in use, or propose physical alterations or improvements that cause transportation and circulation impacts. The level of TMP complexity will depend on the project scope as well as the context and intensity of transportation and circulation implications. In completing a TMP, federal agencies should determine whether plans or projects have impacts on regional transportation infrastructure and provide appropriate mitigation to reduce impacts.

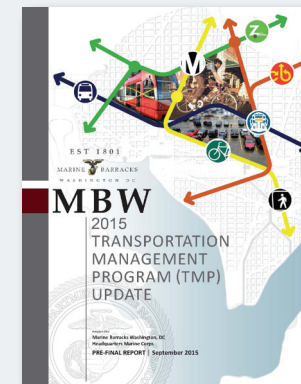
It is important to understanding how transportation conditions at facilities are changing and whether TMPs are effectively managing transportation demand. NCPC will check in with applicants every two years and ask for a status report on their transportation metrics including information on mode splits. Refer to the Transportation Element Addendum and the NCPC Submission Guidelines for more information on TMP requirements, TDM strategies, and monitoring and reporting requirements.

#### The federal government should:

**T.D.1** Prepare Transportation Management Plans for federal facilities that encourage a multimodal transportation system that meets the needs of workers, residents, and visitors, while improving regional mobility, transportation access, and environmental quality. TMPs should be used as ongoing guidance documents over the term of the plan, particularly to help agencies meet NCPC parking ratio policies and reduce SOV travel.

**T.D.2** Develop an integrated Transportation Demand Management program as part of Transportation Management Plans to reduce impacts on regional congestion, improve environmental quality, and minimize parking demand at federal destinations.

**T.D.3** Continue to monitor existing transportation demand management programs and transportation metrics, including the commute mode split for the facility.



### Transportation Management

The Transportation Element Addendum details requirements for Transportation Management Plans (TMP) and Transportation Demand Management (TDM). It discusses the purpose of TMPs, and their use by the Commission in the review of master plans and projects. Guidance on developing TMPs and a general outline of TMPs is provided. The addendum also explains the role of TDM in meeting transportation goals and managing the impact of federal government operations on the region's transportation system. Suggested TDM strategies for federal facilities are provided along with relevant case studies and recent examples of TMPs reviewed by NCPC.

## D.2 Workplace Parking

The availability of parking is perhaps the most important factor that influences how individuals commute. Given this reality, NCPCC has emphasized the importance of parking ratios that limit or reduce parking provided at federal workplaces for decades. Further, when a reduction in parking supply is offset by transportation management approaches that increase multimodal transportation options, such ratios can effectively reduce the federal government's contribution to regional congestion, improve environmental quality, and reduce parking maintenance costs. Parking ratios encourage federal agencies to think creatively about ways that can reduce demand for limited parking spots, while encouraging their employees to reduce their commuting footprint on regional resources.

Since the emergence of the Metrorail system in the 1970s, these parking ratios have been an integral component of NCPCC's project review. The ratios—the number of employees for each employee parking space—are divided into four general zones reflecting the area's transit accessibility.<sup>19</sup> They reinforce a sustainable regional development pattern characterized by greater density closer to the core of Washington, DC and to public transit service.<sup>20</sup> This development pattern also reflects that the greatest concentration of federal employees work in Washington, DC. Accordingly, facilities closer to the core, with greater access to transit, have stricter parking requirements, while facilities in the environs are generally allowed to retain more parking. Federal facilities with more stringent parking requirements should plan for more transit-supportive, compact development on their property and institute more robust TMPs.

The policies in this section assign a parking ratio to each zone throughout the region, which allows for a certain number of parking spaces for each employee within that zone based on transit accessibility. Additional policies provide direction for workplace parking facility design, placement, access, and closely related TDM measures. Policies encourage coordinating with stakeholders near the facility to minimize automobile parking space development. In other circumstances, coordination may be necessary to limit federal employee parking demand from spilling over and occupying nearby residential parking spaces.

The Federal Workplace Element includes policies discouraging new employee-intensive facilities in outlying areas with poor accessibility, since funding infrastructure expansions are inefficient, expensive, and increasingly more difficult. However, agencies may find some efficiencies in developing new facilities, as they have an opportunity to thoughtfully plan for transportation access, including the effective accommodation of newer, more innovative transportation modes, which is generally more complicated and costly when retrofitting existing facilities. In siting new facilities, all agencies should work with local jurisdictions to reduce transportation demand in a manner that would allow the facility to exceed NCPCC parking ratio standards, if possible.

Applicant agencies are expected to comply with all applicable policies in the Comprehensive Plan's Federal Elements. Nonetheless, some uncertainty is inherent in transportation development. Challenges can include a lack of specified funding for TDM programs. NCPCC recognizes these uncertainties and complexities. In rare circumstances where broader goals are more important, deviations from the particular employee ratio may be appropriate. The criteria to request a deviation for a specific project are detailed in NCPCC's Submission Guidelines (<https://www.ncpc.gov/review/guidelines/>).

## National Capital Region Federal Parking Study

NCPCC partnered with the U.S. Department of Transportation John A. Volpe National Transportation Systems Center to evaluate its parking ratio policies in light of industry best practices and available regional transportation data. This technical study included a transportation literature review, analysis of local jurisdictions' parking policies, and assessment of current and predicted transportation accessibility at federal facility locations within the National Capital Region.

The study made several recommendations to improve NCPCC policies, including:

- Making NCPCC's parking policies and processes more data-driven, standardized, and performance-based. This recommendation is implemented by the development of a data-driven approach to parking policies at federal facilities based on transportation accessibility and planned regional transit and highway improvements. Policy T.D.4 reflects this recommendation.
- A formalized process for allowing deviations from the parking ratios prescribed for a particular facility. While all facilities will be expected to meet their prescribed parking ratio in a master planning process, NCPCC staff developed a process for deviations for individual projects, which is described in the NCPCC Submission Guidelines on page 16.
- Routinely monitoring the performance of TDM programs at federal facilities. Policy T.D.3 reflects this recommendation and monitoring is further described in the Addendum to the Transportation Element on page 7.

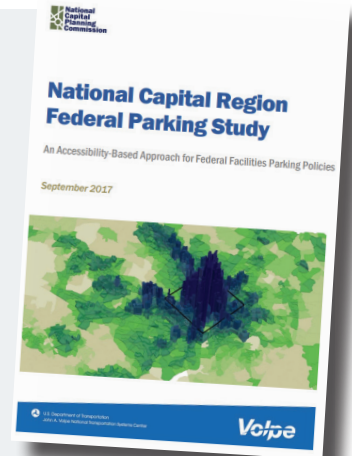
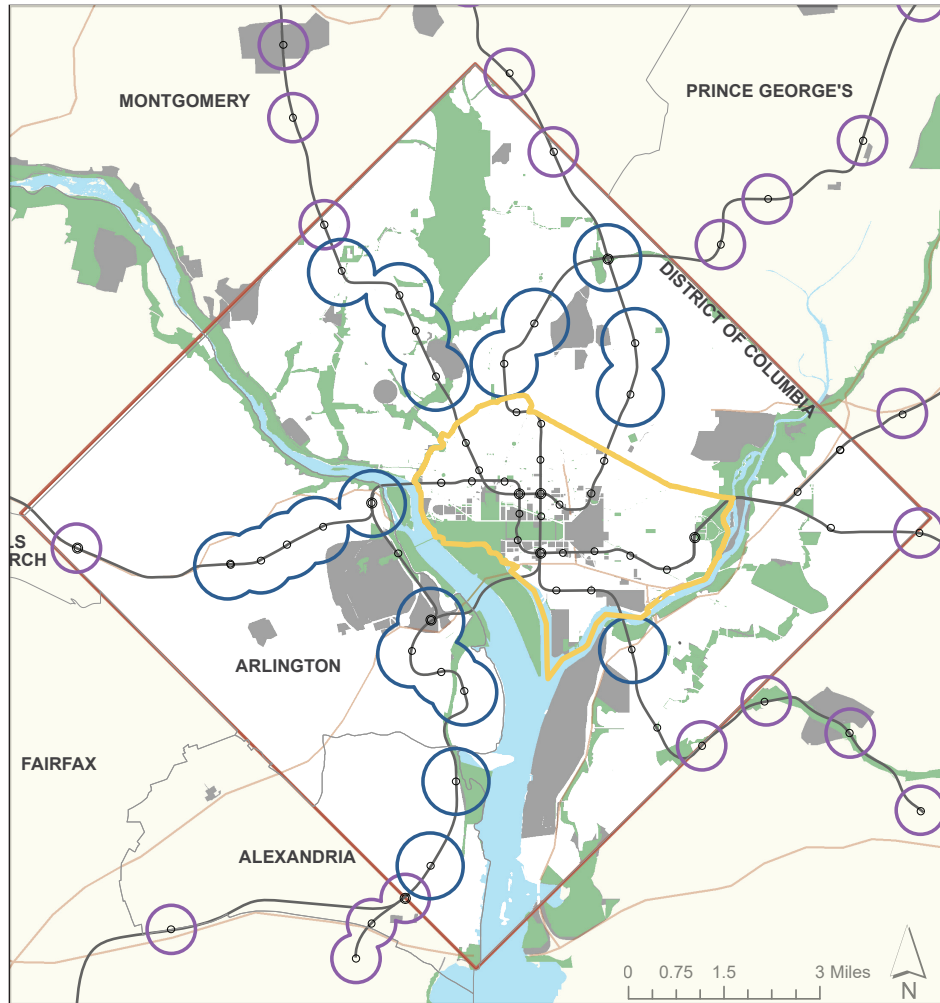


Figure 1: Parking Ratios for the Historic Core Area



**Federal Parking Ratios**

- ▭ L'Enfant City - 1:6  
83% non-SOV mode share
- Transit-Rich Corridors - 1:4  
75% non-SOV mode share
- Transit Accessible - 1:3  
66% non-SOV mode share
- ▭ Historic DC Boundary 1:3  
66% non-SOV mode share
- ▭ Suburban Areas Beyond Metrorail - 1:2  
50% non-SOV mode share
- ▭ National Park Service Lands
- ▭ Federal Lands
- Metrorail
- Jurisdictional Boundaries

**The federal government should:**

**T.D.4**

Meet the following zone-based (refer to map on this page and page 21) parking space-to-employee<sup>21</sup> ratios:

**L'Enfant City:** In the L'Enfant City, the parking ratio should not exceed one space for every six employees (1:6). [83 percent non-SOV mode share]

**Transit-Rich Corridors:** In highly Metro-accessible portions of the Historic DC Boundary, the parking ratio should not exceed one space for every four employees (1:4). [75 percent non-SOV mode share]

**Transit Accessible:** For the remainder of the Historic DC Boundary Zone and suburban locations within 2,000 feet of a Metrorail station, the parking ratio should not exceed one space for every three employees (1:3). [66 percent non-SOV mode share]

**Suburban Areas Beyond Metrorail:** For all other locations in the region, including areas served by high-occupancy toll/high-occupancy vehicle lanes or high-frequency commuter rail, the parking ratio should not exceed one space for every two employees (1:2). [50 percent non-SOV mode share]

If a facility falls between two zones, the stricter parking ratio will be upheld.

**T.D.5**

Provide priority parking spaces in convenient locations for high-occupancy and energy-efficient vehicles to improve sustainability.

**T.D.6**

In accordance with federal law, locate dedicated parking spaces for employees with ability impairments in locations that connect to the shortest accessible route to building entrances.

**T.D.7**

Limit parking for temporary users conducting official business at a given federal workplace. These spaces shall be exempted from the installation's employee/parking ratio as specific in Policy T.D.4. Visitor destinations with more substantial parking needs should refer to Section D.3 for applicable parking policies.

**T.D.8**

Provide limited parking spaces for fleet or operational vehicles as needed to meet mission requirements. These spaces shall be exempted from the installation's employee/parking ratio as specified in Policy T.D.4.

**T.D.9**

Consider leasing existing parking near federal facilities to meet parking needs before building new parking at a facility. These spaces shall not be exempted from the installation's employee/parking ratio as specified in Policy T.D.4.

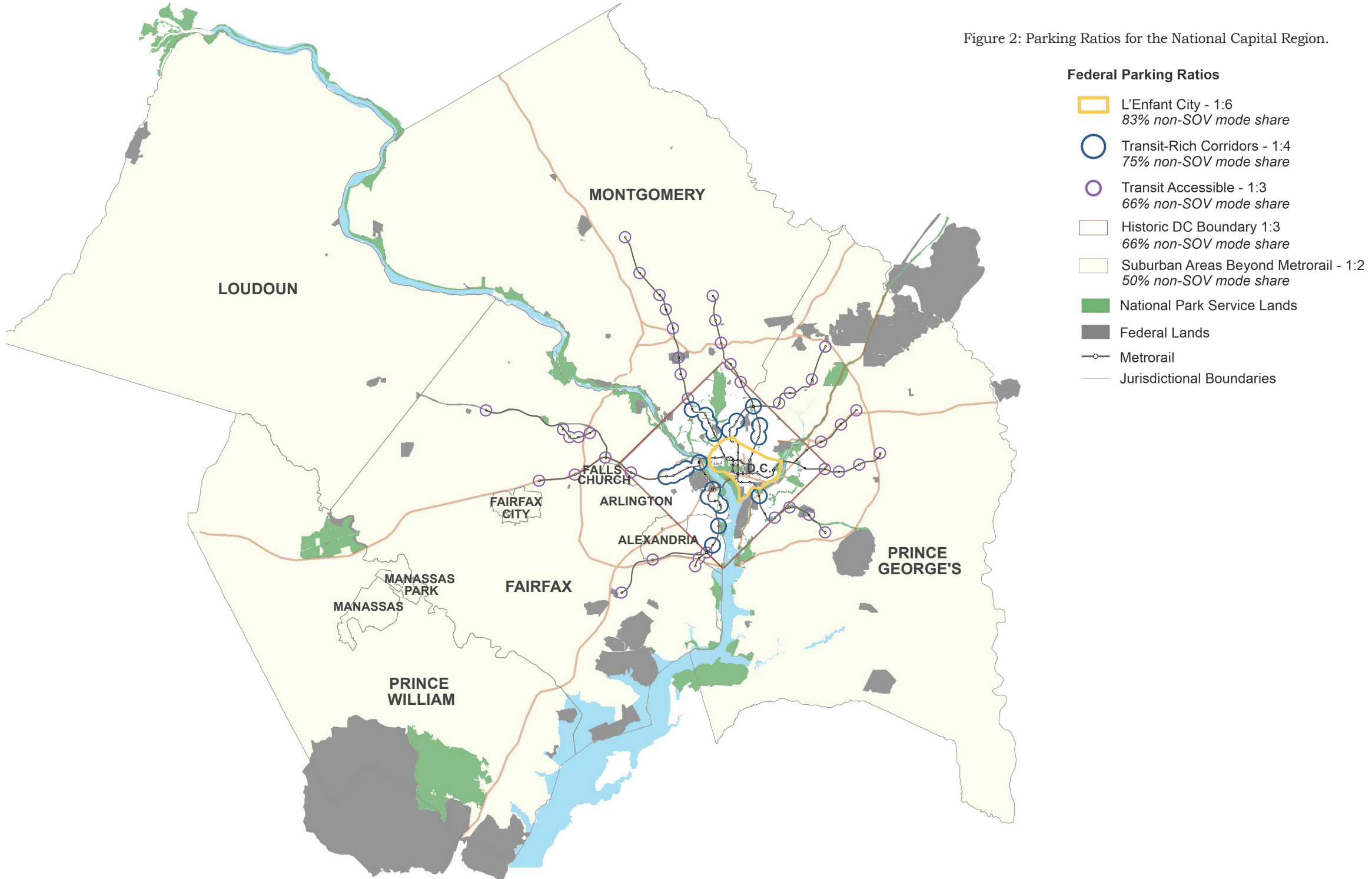
**T.D.10**

Minimize adverse impacts of transportation decisions on adjacent communities including spillover parking and congestion.

**T.D.11**

Consider charging employees for agency provided parking or treating agency provided parking as a taxable benefit to the extent permitted by law as a transportation demand management tool to reduce overall single-occupancy vehicles.

Figure 2: Parking Ratios for the National Capital Region.



### D.3 Visitor Parking

The National Capital Region is one of the most widely visited in the country—due in large part to its role as the seat of the federal government and the range of cultural and natural resources located in the area. These sites include nationally significant monuments and memorials, and more common non-workplace federal uses like grocery stores and movie theaters on military installations. They also include training or conference centers at world-class federal research institutions which welcome local, national, or international visitors as part of their missions.

While a concentration of popular visitor sites is in downtown Washington, many visitor destinations are spread throughout the region, as standalone sites and on federal campuses. The dispersed nature of these sites means that visitor access can be a challenge, and availability of a range of travel modes to reach them can be highly variable. It is important to manage trips to and from destinations, as well as transportation choices once visitors reach a destination.

Though many sites in Washington, such as the National Mall, can be easily accessed by multiple modes including Metrorail and bicycle, access to other sites in the region, such as Great Falls Park in Virginia, is easiest via automobile. And with a rapidly expanding multimodal network throughout the region, the level of access is constantly changing. Accordingly, transportation needs at many of these locations, including parking, vary from site to site.

The demand for parking at visitor destinations, particularly national attractions, can vary based on time of year, day of the week, and if a special event is taking place. During special events such as the Cherry Blossom Festival, when travel demand is the highest, agencies often emphasize the importance of transit as an alternative to travel by personal vehicle. Accordingly, visitor parking should not seek to accommodate peak demand, but instead a more reasonable estimate of demand on a typical high-visitation day.

#### The federal government should:

- T.D.12** Consult the parking policies of local jurisdictions to determine appropriate parking standards for non-workplace federal uses, including residential, commercial, and institutional uses. Absent clear local guidance, the federal government should determine appropriate parking ratios consistent with other comparable regional standards or industry best practices.
- T.D.13** Consider a range of transportation management techniques to enhance multimodal access to visitor destinations before expanding parking, particularly for destinations in more isolated areas of the region. Such strategies may include improved multiuse trail connections, bus facilities, and sidewalks, along with improved pedestrian wayfinding.
- T.D.14** Evaluate current parking conditions at visitor destinations, as well as projected parking demand related to any anticipated plans and projects, to demonstrate the need for expanded parking facilities. Such studies should include an assessment of parking congestion, turnover rates, and any impacts to resource conditions or the visitor experience.



Visitors to an event on the National Mall.



## Endnotes

- 1 The National Capital Region, as defined in the National Capital Planning Act includes Washington, DC; Montgomery and Prince George's Counties in Maryland; Arlington, Fairfax, Loudoun, and Prince William Counties in Virginia; and all cities within the boundaries of those counties.
- 2 The jurisdictions within the Transportation Planning Board's defined National Capital Region also includes Frederick and Charles Counties in Maryland, outside of NCPC's defined NCR. Several federal agencies participate as non-voting, ex-officio members of the TPB, including the National Park Service, NCPC, Federal Highway Administration and the Federal Transit Administration.
- 3 *Visualize 2045: A Long-Range Transportation Plan for the National Capital Region*, Metropolitan Washington Council of Governments Transportation Planning Board, 2018, p.11.
- 4 *Visualize 2045*, p. 5.
- 5 *Travel Trends of the Metropolitan Washington Region*, Metropolitan Washington Council of Governments Transportation Planning Board 2018.  
<https://gis.mwcog.org/webmaps/tpb/traveltrends/>
- 6 Ibid.
- 7 WMATA Metro Snapshot, April 2018.
- 8 2019 State of the Commute Survey - Draft Technical Report <https://www.mwcog.org/file.aspx?D=wVVFcy6c4%2froBLQPOi3kBq8jLrftOMP8QTerR%2fMx%2fno%3d&A=9axCbEokWXCjDoxUAR81V9zBTFuKuzfadgWer6%2fTTQE%3d>
- 9 <https://www.whitehouse.gov/wp-content/uploads/2017/11/m-15.01Reduce-the-Footprint-Policy.pdf>
- 10 *National Capital Region Long Range Transportation Plan*, National Park Service, 2018, p.85.
- 11 <https://visionzeronetwork.org/about/what-is-vision-zero/>
- 12 Data was provided in WMATA's public comment letter dated November 6, 2019.
- 13 <https://www.wmata.com/initiatives/strategic-plans/upload/KMSRA-Strategic-Plan-Jan-2019.pdf>
- 14 *National Capital Region Long Range Transportation Plan*, National Park Service, 2018, p.xiii.
- 15 2019 State of the Commute Survey - Draft Technical Report <https://www.mwcog.org/file.aspx?D=wVVFcy6c4%2froBLQPOi3kBq8jLrftOMP8QTerR%2fMx%2fno%3d&A=9axCbEokWXCjDoxUAR81V9zBTFuKuzfadgWer6%2fTTQE%3d>
- 16 Source: [gis.mwcog.org/webmaps/tpb/clrp/ej](https://gis.mwcog.org/webmaps/tpb/clrp/ej)
- 17 *Visualize 2045*, p. 48.
- 18 [https://www.ncpc.gov/docs/Pennsylvania\\_Avenue\\_Action\\_Plan\\_Summary\\_May2018.pdf](https://www.ncpc.gov/docs/Pennsylvania_Avenue_Action_Plan_Summary_May2018.pdf)
- 19 NCPC will reevaluate the parking ratios when updating the Transportation Element, and may make modifications if needed to reflect major changes in regional accessibility.
- 20 In measuring public transit access, the ratios define reasonable walking distance as 2,000 feet (about a 10-minute walk).
- 21 Employees, for the purposes of the Federal Transportation Element, refers to both federal employees and on-site contractors, who would have regular commute patterns to a federal facility.



# Transportation Element Addendum

This addendum is a resource that supports policies within the Comprehensive Plan's Transportation Element. The addendum articulates NCP's requirements for Transportation Demand Management and Transportation Management Plans and explains key concepts.

The addendum is comprised of two sections:

1. The role of Transportation Demand Management in meeting transportation goals and managing the impact of federal government operations on the region's transportation system.
2. An overview of the purpose of Transportation Management Plans, and their use by the Commission in the review of master plans and projects.

The addendum is adopted as part of the Comprehensive Plan and may be referenced in Commission activities, as appropriate.

# Transportation Element Addendum

## Contents

**Transportation Demand Management..... 3**  
**Transportation Management Plans..... 4**



## Transportation Demand Management

### Overview

Transportation Demand Management (TDM) refers to a series of strategies designed to maximize traveler choices.<sup>1</sup> Historically, TDM strategies have focused on commuter ridesharing and included a range of options such as increasing the number of people in a vehicle, increasing transit ridership, or influencing the time of or need to travel. These strategies continue to play an important role in influencing travel choices. More recently, with advances in technology and the expansion of mobility options (dockless bicycles, electric scooters, etc.), personal travel decisions have become more dynamic and adaptable. In response, TDM strategies are evolving to incorporate new travel modes that offer travelers expanded transportation options.



### TDM and the Federal Government

Effective TDM strategies can help federal agencies meet larger NCPD policy objectives of environmental protection, sustainable development, congestion reduction, energy conservation, and improved quality of life. They can also help reduce parking demand to meet established parking ratios for federal facilities. Policies in the Transportation Element outline the major goals of managing transportation demand, and provide a framework for promoting TDM as part of the federal planning process.

With 429,000 federal employees and more than 400,000 contractors in a region of 3.8 million workers, the federal government has a vested interest in ensuring the transportation system is efficient and reliable.<sup>2</sup> The federal government is in a position to provide leadership regarding transportation decisions and meet its mobility needs by using TDM to influence employee decisions regarding travel to and from the workplace. TDM can also apply to federal visitor destinations, such as the National Zoo and other attractions, by influencing the way visitors travel throughout the region.

A federal facility's location within the region directly influences its impacts on the local and regional transportation system and employee/visitor travel behavior, which, consequently, relates to the range of TDM strategies that may be appropriate for the facility. Generally, facilities located closer to downtown Washington have access to greater travel options, and benefit from better bicycle and pedestrian infrastructure. These facilities can typically support more multimodal travel, with a reduced reliance on single-occupancy vehicle (SOV) trips. TDM strategies for these more urban facilities may focus more on programmatic changes, such as policy modifications or transit incentives to encourage multimodal travel.

In contrast, federal facilities situated further away from downtown Washington, in areas with fewer travel options, may require more comprehensive TDM approaches that encompass both programmatic and physical strategies to reduce SOV trips. These strategies would likely include close collaboration with local municipalities to ensure federal facilities are effectively leveraging local resources to improve travel, such as local transit lines, planned bicycle/pedestrian infrastructure improvements, etc. For example, if transit is available in proximity to a facility, the agency may be able to work with the appropriate service provider to implement convenient transit for the facility. Regardless of where a federal facility is located, federal agencies should strive to minimize SOV trips by instituting aggressive travel goals and implementing a wide variety of TDM strategies.

The planning and development of federal facilities greatly influences travel behavior both on- and off-site. With proper planning, federal agencies can implement TDM strategies that minimize the federal impact on regional congestion and seek to improve transportation efficiency. As part of the planning process, federal agencies are encouraged to work with regional and local agencies to develop TDM strategies that meet mutual sustainability goals and minimize the impact of federal transportation decisions on surrounding communities.

## Effective TDM Strategies

The *National Capital Region Federal Parking Study* highlighted several TDM strategies that could effectively reduce parking demand. The study identified policies and programs as well as land use management as categories for TDM strategies. Within policies and programs, the parking study noted the following strategies that could be useful to federal agencies: commute trip reduction programs, active commuting, transit/parking/biking allowances, bicycle parking and provision, walking conditions, telework/alternative working arrangements, traffic calming, and transit improvements.

Within land use management, the parking study noted shared parking and land banking as tools that reduce reliance on automobiles, thereby reducing parking demand. Shared parking refers to adjacent or neighboring sites using the same parking spaces, but at different times of the day or week. Land banking reserves undeveloped or lightly developed space to be used for parking if such a need arises.

Agencies in the NCR have considered a range of TDM strategies as part of their transportation planning processes, which vary depending on internal agency policies and directives, and external factors such as the location of the site within the region, urban/suburban context, and security level. Successful TDM programs could include a range of individual strategies to meet regional transportation goals articulated in the Transportation Element and reduce reliance on SOV modes of travel. They might range from very simple, inexpensive strategies, like creating a rideshare bulletin board, to more complex, bigger-impact strategies, like developing a shuttle to provide access to and around a major federal campus. Among the most successful strategies are the transit subsidy and telework programs for federal employees. Increasing the transit subsidy or applying subsidies or other incentives to bicycling, carpooling, vanpooling would contribute towards reducing SOV travel.

In general, effective TDM strategies tend to fall within the following broad categories of actions:

- Information sharing (e.g., establish an employee transportation coordinator)
- Parking management (e.g., develop installation-wide parking guidelines, charging for parking)
- Telework or alternative work schedules (e.g., promote the use of flexible work schedules, as appropriate to meet agency missions)
- Subsidy programs (e.g., implement a bicycle commuting benefit)
- Local/regional coordination (e.g., work with local transit providers to improve service to and from the installation)
- Mobility options (e.g., develop a pedestrian and cyclist master plan)
- Land use and urban design (e.g., install bike storage, lockers, and/or showers for facility modernization projects)

### Pricing as a TDM Tool

Charging for agency provided parking is a transportation demand management strategy to help reduce parking demand to achieve parking ratio goals. While implementing this strategy is dependent upon an agency's authority, it can be an effective tool in changing travel behavior, reducing parking, and reusing land occupied by parking facilities for other mission needs. The Transportation Element encourages agencies to consider charging employees for agency provided parking as a transportation demand management tool, or treating agency provided parking as a taxable benefit to the extent permitted by law.

For example, beginning in 2014 the General Services Administration (GSA) stopped providing free parking to GSA employees at many of their facilities. Through this effort, GSA seeks to encourage the use of public transportation and mobile work arrangements to help reduce traffic congestion and meet sustainability goals.

## Transportation Management Plans

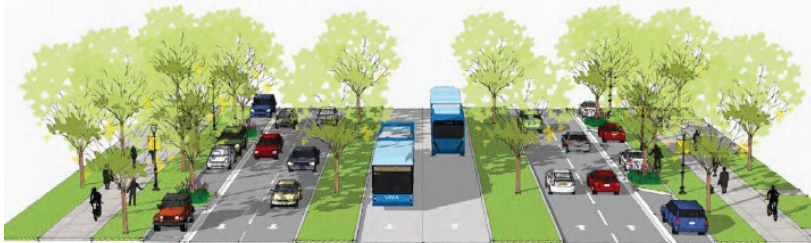
### Overview

A Transportation Management Plan (TMP) is a campus or site-specific plan that sets forth short- and long-term transportation goals for federal facilities and documents TDM strategies to help meet those goals. In general, TMPs should help facilities operate in a more sustainable manner, and modify employee commuting behavior to more efficient and less impactful levels. TMPs are also intended to describe how a federal facility will meet federal transportation policies, which are described in the Transportation Element, including federal employee parking ratios.

Since 1984, NCPD has overseen a system of employee parking ratio policies for federal facilities, which limit the amount of allowable parking at federal workplaces to help drive desirable development and achieve larger environmental goals. The ratios are based on the extent of transportation alternatives available at a given site, with more stringent ratios in proximity to existing and planned transit. To meet these policies, facilities should develop TMPs that incorporate a range of TDM strategies to reduce reliance on single occupant vehicles for federal commuting. By limiting SOV commuting, agencies can reduce roadway congestion, emissions, impervious surfaces, and parking demand, as well as costs associated with building and maintaining parking infrastructure.

## Parking Ratio Deviations – Master Plan vs. Project?

Deviations will not be permitted at the master plan level but may be considered for individual projects. The master plan is a comprehensive document that considers mission needs and anticipates new or changing activities, workforce and visitor projections, and facility conditions, typically over a 20-year planning horizon. They consider complex planning issues such as accommodating future changes in transportation and is designed to meet long-term transportation goals. Therefore, the master plan should identify how the long-term parking ratios will be achieved as identified in Section D.2 of the Transportation Element. However, as individual projects are conceptualized during the master plan timeline, temporary needs may be considered for a deviation from the parking ratio.



## TMPs and the NCPC Review Process

NCPC requires the completion of a TMP for all master plans and any project that staff determined has transportation implications. Examples of projects that may have transportation implications include those that cause an increase in the number of employees or visitors travelling to a workplace or other destination, change established uses, or propose physical alterations or improvements that affect transportation and circulation. The level of TMP complexity will depend on the type of project and context and intensity of transportation and circulation implications. For smaller sites with fewer employees or visitors, the document may be relatively minimal, with an assessment of current conditions and simple list of TDM strategies, while larger sites should include more comprehensive data collection and analysis, along with a robust program of TDM strategies.

Federal agencies should consult with NCPC, local jurisdictions, and transit planners early in the planning to identify existing/future travel issues and opportunities, both locally and regionally. Master plans and projects, along with their associated TMPs, will likely require multiple consultations due to their comprehensive scale and relative complexity. Planned improvements (e.g. wider sidewalks/better lighting, bicycle routes, etc.) and regional development/transportation infrastructure projects—reflected in the Metropolitan Washington Council of Governments vision plan—will influence future travel decisions and worksite parking demand. Federal planners may need to advocate for additional transit service and/or infrastructure improvements to help improve non-SOV travel.

TMPs should be submitted as part of the required master plan update or project submission for NCPC review and potential referral to appropriate local, regional, and state agencies. The applicant should be prepared to consider all comments made by the Commission and local/state agencies as part of the planning process, and to incorporate any recommended new strategies and programs as funding is available and off-site infrastructure improvements permit. The mandatory federal referral process for master plans is described in more detail in NCPC's Submission Guidelines.

## Outline of a TMP

TMPs and master plans should be developed and fully integrated with one another with the recognition that the built environment and travel behavior are inextricably linked. As such, master plans should support TMP goals through sound strategies that foster mixed-use, denser development, and development near existing or proposed transit routes. Successful TMPs rely on supportive master plans and the implementation of master plans require integrating transportation planning into the process.

TMPs should serve as practical, usable documents, revised to reflect changing agency needs, employee demographics, and on/off-site travel conditions, and should be updated in conjunction with master plan updates. Plans are based on thorough analysis of travel conditions (i.e., local transportation network, on-site infrastructure, employee commuting characteristics), with assumptions used to set goals based on data from agency and non-agency sources. NCPC requires that federal agencies review their master plans and TMPs at least every five years to ensure that they accurately reflect forecasted changes to the campus/installation. Typically, a TMP will include the following elements:

1. Introduction with defined goals and objectives
2. Description of existing and planned transportation system
3. Travel patterns and behavior
4. Projected travel and impacts
5. Transportation demand management
6. Implementation
7. Monitoring and evaluation

## 1. Introduction

The introduction should summarize how the TMP supports the master plan, provide an overview of the projected growth and development at a federal site, and articulate transportation goals and objectives. Goals should be designed for short, medium, and long-term time horizons that are clearly outlined in the TMP. Federal applicants are encouraged to consult with NCPC and local jurisdictions to set specific worksite travel goals. The introduction should include a written policy statement that demonstrates the federal agency's commitment to reducing SOV travel and meeting applicable NCPC policies.

NCPC parking ratios are intended to serve as targets for federal worksites based on anticipated future transit accessibility by 2030. Accordingly, all federal TMPs, which are intended to examine the long-term transportation outlook for a given facility, should include TDM strategies and mode split goals that would meet applicable parking ratios. Deviations from the ratio will only be considered for individual projects within a master plan when they are submitted for Commission review. Additional information on deviations and the criteria applicants must meet are provided in NCPC's Submission Guidelines.

### Key Questions to Consider when Creating a TMP:

1. What is the purpose of the TMP and how does it support regional, state, and local transportation plans and projects?
2. What is the projected change in employee population?
3. What are the major construction projects and improvements planned for the facility, and how will the influence travel patterns at the facility?
4. What are the goals and objectives of the TMP? Specifically, what are the goals for trip reduction, mode split, and vehicle occupancy?

## 2. Description of an Existing and Planned Transportation System

The TMP should include a description and analysis of the existing transportation system on and adjacent to a federal facility, as well as planned infrastructure and service improvements. It is important to understand the existing environment surrounding a federal campus/installation to ascertain what types of changes are necessary to enable more efficient, sustainable, cost-effective travel. The TMP should describe the local roadway network, parking facilities, transit facilities, and pedestrian and bicycle facilities.

Along with the existing transportation system, the TMP should describe planned regional and local transportation infrastructure or service improvements within the adjacent area (within five miles) of a facility. Future transportation projects should be considered as agencies prepare TMPs to determine how a facility could leverage these improvements to help manage transportation demand, and where specific conversations with transportation providers may help maximize access for federal commuters.

### Key Questions to Consider when Creating a TMP:

1. How do commuters currently travel to and from the facility? How have commuters traveled to and from the facility? Are there any trends?
2. What are the range of travel options available at the facility, including transit, commuter rail, bikeshare, bicycle/pedestrian routes, high-occupancy vehicle lanes?
3. What types of transportation programs or incentives are available to employees, such as carpool/vanpool, telework, alternative work schedules, etc.?
4. What is the extent of parking provided for employees and visitors at the facility? Is the facility in compliance with the NCPC parking ratio?

5. What regional and local transportation projects are planned adjacent to the facility, and how would these projects influence travel to the facility?
6. Is development planned for nearby regional activity centers that would increase the range of housing options and thereby result in future pedestrian, bicycle, and transit mode share gains?





### 3. Travel Patterns and Commuter Behavior

TMPs should set out travel goals based on planning and survey data, as well as future planned master plan development. To appropriately set these goals, TMPs should include a detailed assessment of commuter behavior, employee housing information, and non-SOV travel challenges/opportunities. An understanding of shifts in workforce housing patterns over several years can help determine if employees are choosing to reside closer to worksites and in more accessible locations near transit stations/stops, which can help reduce SOV use. A series of thematic maps with zip code or census tract data can help illustrate changes in where workers live over time. Commuter surveys should collect data related to barriers to non-SOV travel and willingness to change commuting patterns. This will assist agencies with focusing outreach and education on workers who indicate that they would consider changing from SOV to non-SOV travel modes.

#### Key Questions to Consider when Creating a TMP:

1. Where do employees or visitors travelling to a facility live? Have employee residential locations changed over the past 5 to 10 years?
2. How, or by what mode, do employees/visitors currently travel to the facility?
3. How long does it take to commute/travel to a facility from a place of residence?
4. What times of day do employees/visitors work/travel to the facility?
5. What are the challenges/opportunities to commuting by non-SOV modes? Are there barriers that could be addressed to shift travel behavior?
6. Are telework or alternative work schedules allowed for agency employees, and, if so, how do these schedules affect employee travel patterns?
7. What kind of commuter benefits/subsidies are available, such as transit subsidies or bicycle commuter programs?

8. How might the expansion of alternative transportation services or traveler incentives influence employee/visitor travel, including shuttle services or subsidies for alternative transportation?

### 4. Projected Travel and Transportation Impacts

TMPs should include an analysis that describes how anticipated employee population shifts or development projects contemplated in the master plan will affect the transportation system and travel to a federal facility. The analysis should forecast impacts on the surrounding roadway network, transit service, and bicycle and pedestrian access. This section should describe projected peak hour traffic by mode and include a summary of existing and proposed parking by type of assignment (e.g., official vehicles, carpools/vanpools, commuter vehicles, visitors, etc.). If future development is projected to cause adverse transportation impacts, mitigation measures should be identified and accounted for in TMP goals, consistent with any required environmental compliance documentation.

#### Key Questions to Consider when Creating a TMP:

1. How will implementation of the master plan affect the transportation system, including the surrounding roadway network, transit service, and pedestrian and bicycle routes?
2. What mitigation measures could alleviate the adverse impacts on the transportation system?
3. Are new parking facilities proposed in the master plan? How would the addition of new parking spaces impact compliance with NCPC parking policies?





## 5. Transportation Demand Management

TMPs should include a range of TDM strategies to assist an agency with managing travel to its facility, reducing parking demand, and meeting NCPC parking ratio goals. Specific TDM strategies should be designed to minimize vehicle trips and discourage single-occupant travel during peak and off-peak hours, consistent with transportation goals outlined in the introduction. This should include an assessment of how these strategies would help meet desired mode split for the facility. The strategies should mitigate the specific impacts associated with master plan development and should be developed in coordination with regional and local agencies. The TMP should describe the strategies in detail, including anticipated benefits, measures of success, and an assessment of relationships between identified measures.

TDM strategies should respond to the scale and context of the transportation impacts. In some cases, only minor improvements may be sufficient, while in others, a more extensive strategies may be needed. For example, when transportation impacts are expected to be minor, strategies such as improved wayfinding signage, bikeshare stations, bike racks, and reserved van/carpool spaces may suffice to influence travel decisions. Where significant impacts are expected, more extensive strategies may be required, including shuttle systems, new or expanded sidewalks, or multiuse trails. Ultimately, federal planners should work to establish comfortable and safe pedestrian/bicycle conditions, both at the worksite and along routes between federal properties, nearby transit stations/stops, and off-site development. In some cases, telework and alternative work arrangements can be effective TDM strategies to assist agencies in achieving their goals.

### Key Questions to Consider when Creating a TMP:

1. Is the extent of transportation impacts expected to be minor or significant?
2. What TDM strategies would be most effective in mitigating transportation impacts?
3. How do the recommended TDM strategies reduce parking demand and help meet desired mode split goals for the facility?

## 6. Implementation

TMPs should include an implementation strategy that details specific commitments to success, and a timetable with milestones to minimize vehicle trips and discourage single-occupant travel during peak and off-peak hours (see Case Studies and Examples on page 8). Specific future non-SOV mode share goals should be supported by transportation demand management strategies including action steps, schedules, roles/responsibilities, cost/funding, and performance metrics. Successful TDM program implementation requires working with employees and upper management to overcome perceived and real barriers to change.

An Employee Transportation Coordinator (ETC) can be an effective way of implementing, administering, and managing a TMP. The roles and responsibilities of an ETC will vary from agency to agency, but generally ETCs develop, implement, and update commuter programs and policies, including oversight of a facility's TMP. The Metropolitan Washington Council of Governments serves as the primary resource agency for federal ETCs in the region, and NCPC staff is also available to provide guidance on implementing approved transportation management plans. Agency management should provide substantive decision-making authority and strong support to the ETC. Agencies should allocate adequate funding to enable the ETC to conduct regular employee commuter surveys; hold informational meetings/fairs for employees; design and distribute marketing materials; coordinate programs with other nearby federal campus installations, and actively participate in local, regional and national continuing education and training efforts to foster professional development in TDM efforts.

### Key Questions to Consider when Creating a TMP:

1. What specific steps are required to successfully implement the TMP?
2. What is the schedule, timeline, and associated goals for implementing the TMP and recommended TDM strategies?
3. Does the ETC have the funding, resources, and support from management to implement the TMP?

## 7. Monitoring and Evaluation

As part of best practices for transportation management planning, federal worksites should institute a monitoring process to assess TDM performance, and adjust the strategies as needed to improve performance over time. This may include implementing certain strategies, determining whether or not they have been effective in reducing SOV mode share (or meeting other transportation goals), and if not, applying different strategies. This monitoring process should include regular commuter surveys, and may also incorporate other informational efforts such as on-site traffic monitoring, completion of traffic studies, and/or coordination with the human resources department. Travel data should be measured against pre-determined goals/metrics to reveal TMP effectiveness.

In addition to conducting an internal monitoring process to ensure TMP success, NCPC has determined that regular reporting is critical to understanding how transportation conditions at facilities are changing over time, and whether TDM programs are effectively managing travel demand. Accordingly, NCPC will request certain transportation metrics on a biennial basis for all facilities with master plans or for projects that have transportation implications, including those that seek a parking ratio deviation in accordance with the criteria outlined in the NCPC Submission Guidelines.

This biennial report is intended to update NCPC with TMP progress, and generally reflects the data that most agencies should already be collecting to evaluate their transportation planning goals. A sample of those questions is shown at right. At a minimum, facilities will be required to provide an updated mode split as part of this reporting process, as well as a status update on select TDM strategies that the Commission determines have the greatest potential to help a facility meet its transportation goals. This reporting protocol will help the Commission understand larger transportation trends for the facility, and determine whether TMPs are adequately helping facilities meet transportation goals. NCPC staff will coordinate with agencies to initiate and complete the reporting process to ensure the necessary information is provided.

### Key Questions to Consider when Creating a TMP:

1. How will the agency measure the success of the TMP and associated TDM strategies?
2. How might the agency adjust the approach to TMP implementation if the plan is not meeting transportation goals?
3. What is the timeline for completing required monitoring protocols, such as commuter surveys?



### Sample Monitoring Questions

1. Have you met any of your agency TMP milestones? Which milestones are currently in process?
2. Have any projects been implemented since master plan approval that influence parking? Please include any information from the Commission on deviations or conditions.
3. Is there new infrastructure near the building/campus that influences transportation?
4. What is your current number of employees?
5. What is your current parking ratio?
6. Please provide mode choice information for your employees commuting patterns.

## Case Studies and Examples

The following elements are from recent master plan/TMP submissions to NCPC, highlighted as good examples of future transportation management planning, analysis, and programming. These are meant to help federal applicants think creatively when developing their TMPs. The examples below highlight how a range of strategies, from physical improvements to outreach efforts, can be employed to manage transportation demand and influence travel behavior.

### National Institute of Standards and Technology – Gaithersburg Campus

The 2018 Master Plan reflects a number of planned future improvements to encourage non-SOV travel including: establishing an easement outside the campus perimeter to allow construction of a trail connection between two identified pedestrian/bicycle routes; allowing public bus service on to the secure campus; and establishing an on-site pedestrian mall to encourage future ridership on an a planned Bus Rapid Transit (BRT) route. The Plan also identifies a network of recreational trails within the campus and potential future bikeshare stations in convenient locations.

### Fort Belvoir

The 2015 TMP includes a comprehensive list of potential TDM strategies that may be useful for on-site missions to use when attempting to reduce their overall travel impact and helping Fort Belvoir attain its overall NCPC parking goal of 1:1.5 spaces (67 percent). The list includes strategies related to various categories including parking management, agency coordination, regional collaboration, information outreach, mobility choices, and land use and facilities. The plan separates the strategies into short-term (two years), mid-term (five years), and long-term (10+ years) implementation categories, with specific descriptions about why each strategy is important, what each is intended to accomplish, and how each will benefit their agency/employees.

### Marine Corps Base Quantico (MCBQ)

The Bicycle and Pedestrian Mobility Plan is an important part of the installation’s TDM program, intended to improve and expand pedestrian and bicycle-serving infrastructure. The plan includes detailed assessment of existing pedestrian/bicycle travel conditions, identifies specific improvement measures, and articulates how each measure will be implemented during the next 20 years. MCBQ plans to focus on improving the travel environment for pedestrians/bicyclists to encourage a safe training environment, promote the health and well-being of its population, and foster a “park once” environment. More favorable on-site pedestrian/bicycle conditions will also help promote more sustainable commuting to the installation.

### Food and Drug Administration – White Oak Federal Research Campus

The TMP provides a thoughtful discussion of challenges and opportunities associated with various potential TDM strategies that are specifically identified for the campus based on its built environment, surrounding context, and FDA employee travel behavior. TDM goals, which are summarized through an implementation phasing plan table, are developed based on recent commuter survey data. The implementation table articulates anticipated future non-SOV mode share changes based on future recommended action steps.

## Endnotes

- 1 [https://ops.fhwa.dot.gov/plan4ops/trans\\_demand.htm](https://ops.fhwa.dot.gov/plan4ops/trans_demand.htm)
- 2 Draft Federal Workplace Element, July 11, 2019, p.3.